

4K94-37

CHIGNIK MANAGEMENT AREA
ANNUAL FINFISH MANAGEMENT REPORT
1993

By

Alan Quimby
and
David L. Owen

Regional Information Report¹ No. 4K94-37

Alaska Department of Fish and Game
Commercial Fisheries Management and Development Division
211 Mission Road
Kodiak, Alaska 99615

October 1994

¹The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished division reports. These reports frequently serve diverse ad hoc informational purposes or archive basic uninterpreted data. To accommodate timely reporting of recently collected information, reports in this series undergo only limited internal review and may be subsequently finalized and published in the formal literature. Consequently, these reports should not be cited without prior approval of the author or the Division of Commercial Fisheries.

ACKNOWLEDGEMENT

The authors express their appreciation to seasonal employees: Craig Richards, Richard Price, Jeff Bulla, John Cannon, Malcomb Bennett, Martin Hendrich, Jennifer Mensch, Iona Fletcher, and pilots Dave Henley and Randy Weber who worked many long days and irregular hours to keep the Chignik weir operational. Pete Probasco and Larry Nicholson's aid and supervision during the season were also appreciated. Thanks to Doug Pengilly and Jim Blackburn for biometrics support and review. Thanks to Bruce Barrett for his assistance. Thanks to Jim McCullough and Arnie Shaul for their input on the Lower Peninsula of the Alaska Peninsula. We also thank Lucinda Neel, Sharon Theis, Joanne Shaker, and Genie Smith for their technical support.

TABLE OF CONTENTS

| | <u>Page</u> |
|--|-------------|
| LIST OF TABLES | i |
| LIST OF FIGURES | v |
| LIST OF APPENDICES | vi |
| CHIGNIK SALMON FISHERIES | 1 |
| Introduction | 1 |
| Overview of the 1993 Salmon Season | 1 |
| Chinook Salmon | 2 |
| Background | 2 |
| 1993 Management | 2 |
| Sockeye Salmon | 2 |
| Background | 2 |
| 1993 Management | 4 |
| Fishery Chronology | 4 |
| Cape Igvak Sockeye Salmon Fishery | 7 |
| Southeastern District Sockeye Salmon Fishery | 7 |
| Post Season sockeye Scale Pattern Analysis | 7 |
| Pink and Chum Salmon | 8 |
| Background | 8 |
| 1993 Management | 8 |
| Coho Salmon | 10 |
| Background | 10 |
| 1993 Management | 10 |
| Subsistence Salmon Fisheries | 11 |
| 1994 Season Outlook | 11 |
| Special Research Projects | 11 |
| Video Counting Feasibility Study | 11 |
| Area Catch Comparison Study | 12 |
| CHIGNIK HERRING FISHERIES | 12 |
| Background | 12 |
| 1993 Management | 13 |

TABLE OF CONTENTS (Cont.)

| | <u>Page</u> |
|------------------------|-------------|
| LITERATURE CITED | 14 |
| TABLES | 15 |
| FIGURES | 91 |
| APPENDIX | 107 |

LIST OF TABLES

| <u>Table</u> | <u>Page</u> |
|---|-------------|
| 1. Chignik Management Area active permit holders, 1993 | 15 |
| 2. Chignik Management Area fishers' residentiary status, 1966-1993 | 17 |
| 3. Chignik Management Area commercial salmon catches by district, statistical area, and species, 1993 | 18 |
| 4. Chignik Management Area commercial salmon catch and effort by day, 1993 | 19 |
| 5. Chignik Management Area commercial salmon catch and effort by statistical area and day, 1993 | 21 |
| 6. Chignik Management Area average weight comparisons of salmon caught inside and outside the Chignik Bay District, 1983-1993 | 31 |
| 7. Chignik Management Area processors, 1993 | 32 |
| 8. Chignik Management Area commercial salmon catches by year, 1960-1993 | 33 |
| 9. Chignik Management Area economic value and average income per commercial salmon permit holder, in dollars, 1970-1993 | 34 |
| 10. Chignik Management Area salmon escapement by district and statistical area, 1993 | 35 |
| 11. Chignik River chinook salmon runs, 1960-1993 | 36 |
| 12. Chignik weir chinook salmon daily escapement counts, 1993 | 37 |
| 13. Chignik weir sockeye salmon daily escapement counts, 1993 | 38 |
| 14. Black Lake sockeye salmon age composition determined from scale samples collected from Black Lake outlet, 1993 | 39 |
| 15. Chignik Lagoon sockeye and chinook salmon age composition determined from commercial fishery scale samples, 1993 | 40 |
| 16. Chignik and Black Lake sockeye salmon escapements through the Chignik River weir using daily percentages derived from the inseason scale pattern analysis time of entry curve, 1993 | 41 |

LIST OF TABLES (cont.)

| <u>Table</u> | <u>Page</u> |
|---|-------------|
| 17. Harvest of Chignik bound sockeye salmon in the Chignik, Cape Igvak, and Southeast District Mainland Areas from 1964-1993 | 43 |
| 18. Total Chignik Management Area and 80 percent of the sockeye harvest in the Cape Igvak and Southeast District Mainland Areas, 1964-1993 | 45 |
| 19. The Chignik Lakes system stock composition estimates from the scale pattern analysis of age 1.3 sockeye salmon from commercial catch samples, 1993 | 46 |
| 20. The Chignik Lakes system stock composition estimates from the scale pattern analysis of age 2.3 sockeye salmon from the commercial catch, 1993 | 47 |
| 21. Chignik Management Area daily sockeye salmon escapement, catch by area, and run adjusted to Chignik Lagoon date, 1993 | 48 |
| 22. Daily and cumulative sockeye salmon catch and escapement, as determined by scale pattern analysis for the Black Lake stock, 1993 | 51 |
| 23. Chignik Lake sockeye salmon stock estimates for daily and cumulative catch and escapement, based on scale pattern analysis that is adjusted to the Chignik Lagoon date, 1993. | 53 |
| 24. Black Lake weekly estimated sockeye salmon escapement by age class, 1993 | 56 |
| 25. Black Lake weekly estimated sockeye salmon catch by age class, 1993 | 57 |
| 26. Chignik Lake weekly estimated sockeye salmon escapement by age class, 1993 | 58 |
| 27. Chignik Lake weekly estimated sockeye salmon catch by age class, 1993 | 60 |
| 28. Black Lake and Chignik Lake sockeye salmon run estimates by age class for total escapement and catch, based on scale pattern analysis, 1993 | 62 |
| 29. Black Lake, Chignik Lake, and combined total run estimates of sockeye salmon defined by catch and escapement, based on scale pattern analysis, 1954-1993 | 63 |
| 30. Black Lake and Black River tributaries peak aerial survey escapement estimates for sockeye salmon, 1960-1993 | 64 |

LIST OF TABLES (cont.)

| <u>Table</u> | <u>Page</u> |
|---|-------------|
| 31. Chignik Bay District pink salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993 | 65 |
| 32. Central District pink salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993 | 65 |
| 33. Eastern District pink salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993 | 66 |
| 34. Western District pink salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993 | 66 |
| 35. Perryville District pink salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993 | 67 |
| 36. Total Chignik Management Area pink salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993 | 67 |
| 37. Chignik Bay District chum salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993 | 68 |
| 38. Central District chum salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993 | 68 |
| 39. Eastern District chum salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993 | 69 |
| 40. Western District chum salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993 | 69 |
| 41. Perryville District chum salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993 | 70 |
| 42. Total Chignik Management Area chum salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993 | 70 |
| 43. Pink salmon return per spawner in the Central and Eastern Districts, 1962-1993 | 71 |
| 44. Pink salmon return per spawner in the Western and Perryville Districts, 1962-1993 | 71 |

LIST OF TABLES (cont.)

| <u>Table</u> | <u>Page</u> |
|--|-------------|
| 45. Chum salmon return per spawner in the Central and Eastern Districts, 1962-1993 | 72 |
| 46. Chum salmon return per spawner in the Western and Perryville Districts, 1962-1993 | 72 |
| 47. Pink, chum, and coho salmon aerial stream survey counts in the Chignik Management Area , 1993 | 73 |
| 48. Pink and chum salmon escapement estimates for select Chignik Management Area streams, 1953-1993 | 82 |
| 49. Subsistence harvest of salmon in the Chignik Management Area , 1976-1993 ... | 90 |

LIST OF FIGURES

| <u>Figure</u> | <u>Page</u> |
|---|-------------|
| 1. Map of the Alaska Peninsula illustrating the relative location of the Chignik Management Area, 1993 | 91 |
| 2. Map of the Chignik Management Area illustrating district boundaries, 1993 | 92 |
| 3. Map of the Chignik River watershed with inset of western Alaska, 1993 | 93 |
| 4. Map of the Chignik Management Area illustrating statistical areas, 1993 | 94 |
| 5. Chignik Management Area total salmon harvests by species, 1960-1993 | 95 |
| 6. Chignik Management Area exvessel value of salmon harvests, 1970-93. | 96 |
| 7. Average economic value of Chignik salmon per permit holder, 1970-93 | 97 |
| 8. Chignik Management Area chinook salmon catch and escapement, 1960-93 | 98 |
| 9. Age composition of sockeye salmon sampled in the Chignik Lagoon fishery, 1993 | 99 |
| 10. Daily sockeye salmon run by stock to the Chignik Lake system as estimated by scale pattern analysis, 1993 | 100 |
| 11. Black and Chignik Lake sockeye salmon catch and escapement, 1954-1993 | 101 |
| 12. Total sockeye salmon runs to Black and Chignik Lakes, 1954-1993 | 102 |
| 13. Chignik Management Area pink salmon catch and escapement, 1962-1993 | 103 |
| 14. Chignik Management Area chum salmon catch and escapement, 1962-1993 | 104 |
| 15. Chignik Management Area coho salmon catch, 1960-1993 | 105 |
| 16. Chignik Management Area herring harvests, 1980-1993 | 106 |

LIST OF APPENDICES

| <u>Appendix</u> | <u>Page</u> |
|--|-------------|
| A.1. Chignik Management Area forecast for sockeye salmon, 1993 | 108 |
| A.2. Comparison of Black Lake (early run) and Chignik Lake (late run) forecasts versus actual runs in millions of sockeye salmon, 1987-1993 | 110 |
| B. Chignik Management Area commercial salmon management plan, 1993 | 111 |
| C.1. Total sockeye return to Black Lake by brood year and age, 1915-1993 | 142 |
| C.2. Total sockeye return to Chignik Lake by brood year and age, 1915-1993 | 144 |
| D. Emergency orders for the Chignik Management Area, 1993 | 146 |
| E. Kodiak tides, 1993 | 189 |
| F. 1993 Chignik salmon regulations | 192 |
| G. Statistical weeks and corresponding calendar dates for 1993 | 196 |
| H. Chignik Management Area forecast for sockeye, 1994 | 197 |
| I. The Chignik Management Area salmon fishery in Chignik Lagoon as compared to outside districts, 1974 - 1993 | 200 |
| I.1. Percent of the total Chignik sockeye harvest caught in Chignik Lagoon, 1974-1993 | 201 |
| I.2. Percent increase from the previous year of outside Districts sockeye catches using 1975 as the baseline year | 202 |
| I.3. Percent of the total Chignik sockeye harvest caught by District, 1974-1993 | 203 |
| I.4. Percent of the total Chignik sockeye harvest caught in Chignik and Central Districts versus that caught in all other Districts | 204 |
| I.5. Percent of the total Chignik sockeye harvest caught in Eastern, Western, and Perryville Districts | 205 |
| I.6. Catch per boat for all salmon species caught in the Chignik Management Area, 1974-1993 | 206 |

LIST OF APPENDICES (Cont.)

| <u>Appendix</u> | <u>Page</u> |
|---|-------------|
| I.7. Comparison of catch per boat for all species caught in Chignik Lagoon compared to outside districts | 207 |
| I.8. Catch per boat for sockeye salmon caught in the Chignik Management Area, 1974-1993 | 208 |
| I.9. Number of permits and landings for Chignik Lagoon compared to outside districts, 1974-1993 | 209 |
| I.10. Number of boats fished in each District, 1974-1993 | 210 |
| I.11. Number of permit holders and the percentage of their sockeye (by grouping) harvested in the Chignik Lagoon, 1993 | 211 |
| I.12. Number of permit holders and the percentage of their catches (by grouping) harvested in the Chignik Lagoon, 1986 | 212 |
| I.13. The total number of sockeye salmon caught when permit holders are grouped by percentage of effort in Chignik Lagoon as compared to outside Districts, 1993 | 213 |
| I.14. The percentage of effort and total sockeye salmon caught when grouping permit holders by effort in Chignik Lagoon as compared to outside Districts, 1986 | 214 |
| I.15. Catch per unit effort for sockeye salmon by percentage grouping (percent of the total sockeye effort within the Lagoon) for the Chignik Lagoon versus outside Districts, 1993 | 215 |
| I.16. Catch per unit effort for sockeye salmon by percentage grouping (percent of the total sockeye effort within the Lagoon) for the Chignik Lagoon versus outside Districts, 1986 | 216 |
| I.17. Chignik Management Area harvest of salmon by District, 1974-1993 | 217 |
| I.18. Chignik Management Area harvest of salmon in the Central District, 1974-1993 | 218 |
| I.19. Average catch by day in the Chignik Management Area (thousands of salmon), 1983-93 | 219 |
| I.20. Total sockeye salmon caught by month for Chignik Lagoon and Outside Districts, 1976-1993 | 220 |

LIST OF APPENDICES (Cont.)

| <u>Appendix</u> | <u>Page</u> |
|---|-------------|
| I.21. Catch per boat for sockeye salmon caught by month in the Chignik Management Area, 1993 | 221 |
| J. Chignik Management Area herring sac roe fishery management plan, 1993 | 222 |
| K. 1993 Chignik herring regulations | 234 |

CHIGNIK SALMON FISHERIES

Introduction

The Chignik Management Area (CMA) includes all coastal waters and inland drainages of the northwest Gulf of Alaska between Kilokak Rocks and Kupreanof Point on the Alaska Peninsula (Figures 1 and 2). The CMA is bordered by the Kodiak Management Area to the east and the Alaska Peninsula Management Area to the west. The CMA includes approximately 117 salmon producing streams with the Chignik River system being the largest producer (Figure 3).

The CMA is divided from east to west into five districts, the Eastern, Central, Chignik Bay, Western, and Perryville Districts (Figure 4). Five species of Pacific Salmon are commercially harvested: chinook *Oncorhynchus tshawytscha*, sockeye *O. nerka*, pink *O. gorbuscha*, chum *O. keta*, and coho *O. kisutch* salmon. The Alaska Department of Fish and Game (ADF&G), Commercial Fisheries Management and Development Division (CFM&DD), manages the CMA salmon fisheries for each species to achieve biological escapement goals while allowing for an orderly harvest of surplus salmon.

Purse seines are the only legal commercial gear type allowed within the CMA. In 1993, a total of 102 limited entry salmon permits were actively fished in the CMA (Table 1) with 83% of permit holders claiming Alaska residency (Table 2).

This report adds to a report series which dates back to 1922. Since 1992, the editorial review has utilized historical electronic databases dated post-1970. Disparities between previously reported catch and escapement statistics and those presented here can be attributed to the editorial objective of providing the most accurate information available.

Overview of the 1993 Salmon Season

The Chignik Lagoon sockeye salmon test fishery and weir escapement numbers surpassed goals defined by Area Management Plans on June 11. With escapement goals achieved, the Chignik Management Area was opened to commercial salmon fishing. A salmon price dispute resulted in fishers striking, delaying the start of the season. Striking fishers settled with area processors on a sockeye price of \$.80 per pound and fishing commenced on June 19.

The total 1993 commercial salmon harvest in the CMA of 3,717,062 salmon (Tables 3-6), processed by five companies (Table 7), was the second largest harvest in the past 34 years and was approximately 22% more than the 1984-93 average of 2,893,643 fish (Table 8; Figure 5). The chum harvest was below expected values, similar to other areas throughout the State. All other salmon species were harvested well above forecasted values (Appendix A.1-A.2).

The exvessel value of the 1993 commercial salmon harvest was approximately \$9,938,096, the lowest valued fishery post-1985 (Table 9; Figures 6 and 7).

Total salmon escapement in the CMA was estimated at 2,177,323. Although Chinook and sockeye escapement estimates were based on counts through the Chignik weir, pink and chum escapements were estimated by aerial survey (Table 10).

Chinook Salmon

Background

Chinook production in the CMA is limited to the Chignik River system, the largest chinook system on the south side of the Alaska Peninsula (Figure 3). Although there is no directed fishery within the CMA, chinook salmon are harvested incidentally during the directed sockeye fishery. Chinook harvest and escapement occurs primarily during July and August, peaking in July.

Chinook runs (catch and escapement) have ranged from a low of 927 fish in 1974 to a high of 21,461 fish in 1993 (Table 11; Figure 8). The recent 10-year average run has been 10,417 fish. Commercial catches have increased from an average of 1,378 fish (1963-1972) to 6,614 (1984-1993) (Table 8). A corresponding increase in escapement has also occurred within the past ten years (Table 11).

1993 Management

The CMA chinook harvest was 19,515 fish, the highest on record and an increase of 12,901 fish from the 1984-1993 average of 6,614 (Table 11; Figure 8). The harvest occurred from June 19, to September 13 with a peak harvest of 2,137 on July 10 (Table 4).

The total exvessel value of the 1993 chinook harvest was estimated at \$175,690, averaging \$1,722 per permit holder (Table 9; Figure 6).

The 1993 chinook escapement of 1,946 was the lowest escapement since 1981 (Table 12). However, chinook escapement counts are not adjusted for those smaller than 650 mm that could be confused with sockeye salmon, those removed by the sport fishery, those that spawn below the counting weir, or those that escape after the weir is removed.

Sockeye Salmon

Background

Economically, sockeye salmon are the most important commercial salmon species in the CMA. The commercial fishery targets two runs of sockeye salmon that return to the Chignik Lake and Black Lake systems. Sockeye salmon destined for the Chignik-Black Lakes system are also intercepted outside the CMA in two historic fisheries: east in the Cape Igvak Section of the Kodiak Management Area (15% allocation to July 25); and west in the Southeastern District Mainland Section of the Alaska Peninsula Management Area (7% allocation to July 25).

Although most CMA sockeye production originates from the Chignik-Black Lakes system, some spawning activity does occur in the Eastern District, primarily in the Aniakchak River tributaries (Albert Johnson Creek) and Surprise Lake. Tagging studies conducted over several years in the Aniakchak Bay and Cape Kumlik areas, indicate that sockeye salmon harvested in these waters are almost exclusively bound for the Chignik-Black Lakes system (Lechner 1969). Consequently, the Eastern District management strategy is based on the run strength of the Chignik-Black Lakes systems and opens during June concurrently with the Chignik Bay and Central Districts. This management strategy has been approved by the State of Alaska Board of Fisheries and put into regulation as the Eastern District Management Plan (5 ACC 15.360) (Appendix B).

Sockeye escapement goals are 400,000 for Black Lake and 250,000 for Chignik Lake stocks (Appendix B). Commercial fishing time for sockeye salmon has been regulated based on achieving threshold escapements by specific dates for each run. Achieving these thresholds is complicated by the run timing overlap (the transition period), which generally occurs during the latter part of June to early July.

Annually, June 26 through July 9 is the period of transition from early run (Black Lake) to late run (Chignik Lake) fish. Management biologists must assess the catch using age and stock composition estimates to determine which stock dominates during this period. Sampling effort is increased from once a week to every third day to assess the changing age and stock composition. Subsequently, fishing time may be increased to harvest early run fish or may be decreased to allow time for evaluating the late run strength.

Two methods have been developed to estimate the daily proportion of each run during the transition period. The first is based on tagging studies conducted from 1962-1966 (Dahlberg 1968). This study allowed biologists to develop an average time of entry (ATOE) curve to apportion the Chignik sockeye runs into the early and late run components. The second method is based on differential growth between juvenile salmon rearing in Black Lake and Chignik Lake (Burgner and Marshall 1974, Conrad 1983). Sockeye fry rearing in Black Lake (early run) emerge earlier and grow at a faster rate than fry rearing in Chignik Lake (late run) (Narver 1966). The disparity in growth rates between Black Lake and Chignik Lake juvenile salmon is reflected in their scale patterns, which when measured, provide the variables used to separate Black Lake from Chignik Lake sockeye stocks.

This latter method, scale pattern analysis (SPA), is currently used inseason and postseason to assign sockeye salmon to the stock of origin. After the sockeye age composition is determined, models for the dominate age classes (ages 1.3 and 2.3) are constructed using two types of functions: linear discriminate (LDF) and quadratic discriminate (QDF). Models with the highest balanced classification accuracy are then selected for stock apportionment.

In practice, the sockeye stocks are apportioned using scales that are randomly sampled from the Chignik Lagoon commercial fishery (unknowns, n=100). The standards (knowns, n=200) are seined from the outlet of Black Lake (early June) and sampled from the Chignik Lagoon commercial fishery (post July 25) when approximately 100% of the salmon are destined for Chignik Lake.

Inseason estimates, based on standards collected from Black Lake in June and from the previous year's post July 25 age 2.2 fish, represent this year's age 2.3 sockeye salmon. Estimates for age 1.3 fish are not possible because the previous year's post July 25 age 1.2 salmon are too scant to create adequate standards. Therefore, postseason estimates are considered more accurate than inseason because they include standards for both major age classes (ages 1.3 and 2.3).

Age composition of the early run is typically dominated by age 1.3 and 1.2 fish; and the late run by age 2.3 and 2.2 fish. Historically, it is unusual for the early run to have many age 2.2 fish or the late run to have a very large percentage of age 1.2 fish (Conrad 1983).

The preseason Black Lake (early run) forecast is based on the historical relationship between the prior year's total return of age 1.2 fish, the average length (mid-eye to fork of tail) of the prior year's age 1.2 male fish, the parent-year escapement, and the magnitude of the age 1.3 and 2.3 run component. These variables are used within a multiple linear regression forecast model (Appendix A.1, C.1).

The Chignik Lake (late run) forecast has historically been variable in its accuracy, and construction of a model, such as the one used for Black Lake (early run), has been unsuccessful. The late run forecast estimate is based on an average return per spawner estimate multiplied by the parent-year escapement for each age class for years post-1969 (Appendix A.2, C.2).

Spawning distribution of the sockeye escapement has been estimated by aerial survey almost every year since 1960.

1993 Management

The Chignik River weir is located three miles upstream from Chignik Lagoon and was operational from May 28 through August 14. To insure that the weir remained fish tight until removal on August 14, weekly maintenance dives in scuba gear were made on the weir face to repair damage or check erosion beneath the aluminum panels.

Fishery Chronology

Annually, commercial sockeye salmon fishing begins if the cumulative sockeye escapement exceeds 40,000 fish prior to June 12 and is accompanied by a strong buildup within Chignik Lagoon (Appendix B). On June 10 at 4:00 p.m., the cumulative sockeye escapement at the Chignik weir of 56,000 was above the desired escapement goal (Table 13). The favorable rate of sockeye escapement and a harvestable buildup of 50,000-60,000 sockeye salmon in Chignik Lagoon prompted opening the Eastern, Central, and Chignik Bay Districts to commercial salmon fishing from 8:00 a.m. June 11 through 8:00 a.m. June 12 (Appendix D-F). However, this first opening was extended from June 11 until further notice when preempted by a strike called by the Chignik Area commercial fishers.

At 4:00 p.m. June 19, the Chignik area commercial fishers ended their strike and requested a "courtesy flare" at 9:00 p.m. to provide for a smooth transition into an already open Chignik Bay District fishery.

The Chignik Bay, Central, and Eastern Districts remained open until 12:00 noon June 28, when these districts were closed in order to top off the first run escapement. The first run escapement was about 360,000 sockeye salmon, 40,000 fish short of the 400,000 first run escapement goal.

The Eastern District remained closed to commercial salmon fishing from June 28 until July 7, at 12:00 noon to evaluate the strength of Chignik Lake sockeye (second run) as stated in the Eastern District Salmon Management Plan (5 AAC 15.360) (Appendix B).

During 1993, the run transition date (when Black and Chignik Lakes stocks are equally represented in the run) occurred on July 4 as determined by inseason scale pattern analysis (SPA) and age composition data. The highest and most balanced SPA model (QDf) for age 2.2 sockeye had a mean classification accuracy of 79%. Scale samples (8,600) collected from the commercial fishery in Chignik Lagoon were utilized to determine age composition. The proportion of age 1.3 fish (peak=63%) was lower in 1993 when compared to other years (Tables 14 and 15-16; Figure 9). Age 1.2 fish were abundant, peaking at 24% on June 25. Age 2.2 fish represented a small proportion of the age composition, peaking at 14% on June 21.

High catch numbers in early July, age composition, and SPA analyses supported the conclusion that the 1993 season could be characterized as having a below average first run with a possibility of a larger than average second run. After July 4, the percentage of age 2.3 fish and average weight of the commercial catches increased, indicating a greater proportion of second run fish. From this point on, the management priority shifted towards the second run. The total CMA sockeye harvest through July 4, was approximately 860,000 sockeye salmon (Tables 4-5).

The Chignik Bay and Central Districts were opened to commercial salmon fishing for 48 hours from 12:00 noon June 30, until 12:00 noon July 2. During the first 12 hours of fishing on June 30, 41,538 sockeye salmon were harvested. The escapement for this same period was 18,877 fish, for a total accumulated escapement of 388,986 sockeye salmon. These numbers justified a 24-hour extension in fishing time for these two districts until 12:00 noon July 3. Further, a second 24-hour extension was justified when sockeye escapement exceeded interim escapement goals. Both districts were closed to commercial fishing at 12:00 noon July 4.

The entire Chignik Management Area, except for the Mitrofanina Section of the Western District, was opened to commercial salmon fishing for 72 hours from 5:00 p.m. July 7, until 5:00 p.m. July 10. The closure of the Mitrofanina Section was due to historical catches of immature salmon during early July. Aerial surveys in the remainder of the Western, Eastern, and Perryville Districts indicated adequate escapement into streams and sufficient buildup of pink and chum salmon on beaches and in bays to warrant a fishery. Furthermore, the second run escapement was 43,000 sockeye salmon ahead of the July 10 interim escapement goal of 60,000 fish.

On July 8, with continued strong second run sockeye escapements and strong catches that averaged 794 salmon per delivery, an extension of 24 hours was granted, with the Mitrofanina Section of the Western District remaining closed due to the suspected presence of immature salmon.

On July 11, the second run sockeye escapement of approximately 105,000 surpassed the July 19 interim escapement goal of 100,000 fish. Catches were also strong, averaging 836 salmon per

delivery. Therefore, the fishing period was extended for the Chignik Bay and Central Districts, while the outer districts were closed as scheduled to allow for the evaluation of the pink and chum run strengths.

The Chignik Management Area closed to commercial salmon fishing on July 17 to allow for increased sockeye escapement for the second run. Escapement to date for the second run was at 108,000 sockeye salmon, 7,000 fish lower than the high end range goal of 115,000 fish on July 19.

On July 20, the entire Chignik Management Area, except for the Mitrofanina Section, was opened to commercial salmon fishing for an 81-hour fishing period. The Mitrofanina Section remained closed due to the suspected presence of immature salmon. On July 19, an estimated 12,000 sockeye salmon passed through the weir, putting the second run at approximately 143,000 sockeye salmon, meeting the July 19 interim escapement goal of 115,000 fish.

On July 29, a 72-hour fishing period was announced for the Eastern, Western, and Perryville Districts because pink and chum salmon in streams in the outer districts (by July 28) had reached minimum escapement goals. Interim sockeye escapement goals had not been attained to enable commercial salmon fishing in Chignik Bay or Central District. An additional 5,000 sockeye salmon were needed through the weir to meet the lower range of the interim escapement goal for July 29, of 185,000 sockeye salmon.

A commercial purse seiner volunteered to conduct a test fishery around Mitrofanina Island to ascertain the incidental catch of immature salmon. On July 28, the test fish vessel, with a Fish and Game biologist on board, landed approximately 2,600 salmon from three test sets. Results indicated that 2% of the total catch was immature salmon. This was considered below the incidental threshold value for immature salmon, and the Mitrofanina Section was opened to commercial salmon fishing for 60 hours from July 29 to August 1. High water and turbidity created visibility problems at the weir's counting gates during late July and early August. Consequently, the gates were closed to all fish passage during this period. When the water level dropped 1.5 feet and visibility cleared, approximately 10,000 blocked sockeye salmon passed through the weir for a total estimated second run escapement of 190,000 fish. The Chignik Bay and Central Districts opened to commercial salmon fishing for 72 hours from August 2, until August 5. From August 5 until August 9, all areas in the CMA remained closed to commercial salmon fishing.

The Chignik Bay, Eastern, Western, and Perryville Districts were opened for commercial salmon fishing from August 10 until August 13 while the Central District remained closed to allow for escapement. Since the Western and Perryville District's pink and chum salmon stream escapements were inadequate, the fishery was confined to the capes and outside areas, which minimized pink and chum catches. However, in the Eastern District, escapement was sufficient to allow bay fishing.

On September 2, a three-day-per-week commercial fishing period in the Chignik Bay District, and a two-day-per-week commercial salmon fishing period in the Eastern, Central, Western, and Perryville Districts was announced. The two-day-per-week periods allowed sufficient time for additional pink and chum salmon to escape to Eastern, Central, Western, and Perryville District

streams. Furthermore, these openings provided necessary catch information to evaluate coho run strength. This also allowed for the harvest of sockeye salmon that were surplus to escapement requirements. This Emergency Order was effective until October 31, the end of the regulatory commercial salmon fishing season for the CMA.

The exvessel value of the sockeye salmon harvested in the CMA was approximately \$8,210,106 (Table 9; Figure 6). The average value per permit holder was \$80,491 (Figure 7).

Cape Igvak Sockeye Salmon Fishery. The Cape Igvak fishery harvested an estimated 300,055 Chignik bound sockeye salmon through July 25 (Table 17). This represented 15.7% of the total Chignik salmon harvest through July 25, .7% more than allocated by regulation (ADF&G 5 AAC 18.360. Cape Igvak Salmon Management Plan). Harvest after July 25 in the Cape Igvak area totaled 29,850 Chignik bound sockeye salmon, for a total season harvest of 330,000 fish (Table 18).

Southeastern District Sockeye Salmon Fishery. The Southeastern District Mainland fishery estimated sockeye harvest through July 25 was 128,536 fish (Table 17). This represented 6.7% of the total Chignik salmon harvest through July 25, and 0.3% less than allocated by regulation (ADF&G 5 AAC. 09.360. Southeastern District Salmon Management Plan). Catches in the Southeastern District Mainland area after July 25 were 94,055 Chignik bound sockeye salmon for a total of 222,591 sockeye salmon (Table 18).

Post Season Sockeye Scale Pattern Analysis

Postseason SPA models for ages 1.3 and 2.3 were used to assign sockeye salmon to Black Lake or Chignik Lake were created using linear (LDF) and quadratic (QDF) discriminant functions to evaluate which type of analysis would provide the best classification accuracy. The QDF models for the ages 1.3 and 2.3 provided the highest balanced classification accuracies of 79% and 76%, respectively. Estimates using these models were assigned as percent composition to Black Lake or Chignik Lake for each commercial sample (Table 19-20). Interpolation of percent composition between sample dates was calculated for catch and escapement values and adjusted to Chignik Lagoon dates (Table 21) resulting in daily escapement and catch estimates for each stock (Table 22-23).

The Black Lake and Chignik Lake sockeye salmon postseason SPA catch and escapement estimates were less than the inseason estimates. The Black Lake postseason SPA escapement estimate was 364,263 fish, 34,319 spawners less than the inseason estimate and 35,737 less than the 400,000 fish escapement goal (Table 16 and 24-25). The Chignik Lake postseason SPA escapement estimate was 333,114 fish, 88,406 fish more than the inseason estimate and 83,114 fish more than the 250,000 fish late run escapement goal (Table 26-27).

The discrepancy between the inseason and postseason estimates occurred because the inseason estimate, based on the SPA of age 2.3 fish, could not account for the increased number of age 1.3 fish that were actually bound for Chignik Lake rather than Black Lake during the 1993 run year (Table 16). Postseason analysis that included both age 1.3 and age 2.3 SPA models

reassigned age 1.3 sockeye salmon from Black Lake to Chignik Lake. The postseason SPA model shifted the transition date from the inseason estimate of July 4 to July 5 (Figure 10).

Major age classes (in percent) as determined by SPA contributed to the escapement and catch of the Black Lake run as follows: age 1.3 (48.4% and 34.1%); age 1.2 (13.4% and 17.8%); age 2.3 (28.8% and 35.5%); and age 2.2 (7.4% and 10.3%) (Table 24-25). Major age classes (in percent) as determined by SPA contributed to the escapement and catch of the Chignik Lake run as follows: age 2.3 (60.0% and 63.3%); age 1.3 (21.9% and 16.8%); age 1.2 (9.8% and 10.4%); and age 2.2 (5.8% and 6.8%) (Table 26-27) (Appendix G).

In summary, the 1993 sockeye run for Black Lake was 1,291,126 fish and for Chignik Lake was 1,656,098 fish. Total escapement to both lakes was 697,377 sockeye salmon and harvest was 2,249,847 sockeye salmon for a combined total of 2,947,224 fish (Tables 28-30; Figures 11-12). This was within the forecasted range of a 1.74 to 3.78 million total fish return (Appendix A.1).

Pink and Chum Salmon

Background

Pink and chum production in the CMA is characterized by variable escapements and calculated returns per spawner for both species (Tables 31-46). This could be attributed to the physical morphology of the river and stream systems, which are characterized by loose substrates and steep gradients. These systems are impacted by fall, winter, and spring floods which cause streambed scouring, and can result in high egg and fry mortality.

Management of the CMA pink and chum fisheries is based on inseason aerial assessment of escapement (Table 47), and catch per unit effort (CPUE) data. Aerial surveys have been conducted almost annually since 1953 (Table 48). Currently, all salmon processed locally are for the fresh frozen market as there are no operational canning facilities. Consequently, to provide the quality required for fresh frozen processing, the fisheries are managed to intercept migrating fish prior to, or just as they reach terminal waters.

1993 Management

The 1993 projected harvest of pink and chum salmon was 1,300,000 pink salmon and 213,000 chum salmon (Appendix A.1). The projected return of pink salmon was based on the parent odd-year escapement in 1991, and was driven by above average escapements to the Western and Perryville Districts and average escapement to the Central and Eastern Districts. An aggressive management strategy was anticipated early in the season prior to aerial assessment of salmon in bays, stream mouths, and streams.

During June, commercial fishing opens concurrently and only in the Chignik Bay, Central, and Eastern Districts as sockeye escapement goals are met as defined by the Eastern District Management Plan (5 AAC 15.360). These districts remained open from 8:00 a.m. June 11, until 4:00 p.m. June 28, in part because the Chignik area commercial fishers went on strike until 4:00

p.m. June 19. A total of 7,576 pink and 27,924 chum salmon were incidentally caught during this period.

Openings in early July are used to provide an early assessment of pink and chum run strengths. The Eastern District opened on July 7 and after two extensions, closed at 12:01 a.m. July 15, as mandated by regulation (5 AAC 15.360). There was little effort expended in the Eastern District during this fishing period with catches totaling 13,013 pink and 4,310 chum salmon. During this same period, the Western and Perryville Districts were also opened for the first time during the 1993 commercial salmon season. Collectively in the Central, Western, and Perryville Districts; 74,233 pink and 26,471 chum salmon were caught. Kujulik Bay in the Central District and Mitrofanina Section in the Perryville District were closed most of the season to afford protection to weak pink and chum runs to Kujulik and to avoid the taking of immature salmon in the Mitrofanina Section.

Fishing in all districts was closed July 17 and then reopened July 20. Outside districts closed July 25 (after one extension) and then reopened from July 29 to August 1 to allow fishing for pink and chum salmon. The Central, Western, and Perryville, and Eastern Districts produced 217,441 pink and 14,618 chum salmon from July 20 to July 25 and 454,613 pink and 9,719 chum salmon from July 29 to August 1.

The Chignik Bay and the Central Districts were opened to fishing from August 2 to August 5. All other areas remained closed because they needed to be aerial surveyed.

All districts, except the Central District, which remained closed due to low pink and chum escapements, were opened from August 10 to August 13, August 16 to August 19, and August 23 to August 26. During most of August, bays were closed in the Western and Perryville Districts northwest of a line drawn between Alexander Point, Itki Point, and the Road Island markers in Ivanof Bay to enhance escapement. Total pink and chum catches for the Western, Perryville, and Eastern Districts for these periods was 698,548 and 19,716. After August 30, management priorities changed from pink and chum salmon to coho salmon.

The 1993 CMA pink salmon estimated total escapement was 1,181,800 fish, based on the area-under-the-curve method (Johnson and Barrett 1988; Table 36; Figure 13). The escapement in the Eastern District of 520,000 fish was slightly above average for the past 30 years. However, escapement in the Chignik Bay District was considerably below average at 2,000 pink salmon, while the Central District was approximately average for the last 30 years at 161,000 pink salmon (Tables 31-32). The escapement for the Western District of 448,000 fish was the largest in the last 30 years, while the Perryville District escapement of 46,000 fish was the fourth largest (Tables 34-35).

The total catch of 1,648,397 pink salmon was above the projected 1,300,000 pink harvest, and above the 1984-1993 average of 944,543 fish (Table 8 and 36; Appendix A.1). As projected, the largest catches came from the Western and Perryville Districts, totaling 685,605 and 649,071, and the smallest catches came from Central and Eastern Districts totaling 198,463 and 59,329. The projected harvest for pink salmon was exceeded, even though commercial fishers targeted sockeye salmon because of the price differential.

The CMA chum catch and escapement was 122,400 and 255,700 fish (Table 42; Figure 14). In common with low catch and escapement throughout Alaska in 1993, the CMA harvest was below the forecast harvest of 213,000 fish, and below the 1984-1993 average harvest of 153,500 fish (Table 8). Most chum salmon were harvested in the Western and Perryville Districts. The chum escapements to the following districts of the CMA were as follows: Chignik Bay (300), Central (39,400), Eastern (135,200), Western (14,000), and Perryville (66,800) (Tables 37-41). There have been problems with harvests of immature chum and sockeye salmon in past years, which have prompted commercial salmon fishing closures in the Mitrofanina Section of the Western District in early July.

The exvessel value of the pink and chum salmon harvested within the CMA was \$637,666 and \$184,012 (Table 9; Figure 6). The average value per permit holder was \$6,252 for pink salmon and \$1,804 for chum salmon (Table 9; Figure 7).

Coho Salmon

Background

Coho salmon are present throughout the CMA. The largest return is to the Chignik Lakes system, and is the largest coho run within the Westward Region.

Coho salmon are harvested in the commercial fishery starting in mid-July and are still present when the fishery closes in October. For the years 1976 to 1993, coho catches have ranged from 17,430 to 370,420 fish (Table 8). Recently, coho catch distributions have appeared bimodal with a peak in late July during the targeted pink and chum fisheries, and a second one in late August - early September (Table 4; Figure 15). The early coho catches, occurring primarily in the Western and Perryville Districts, have lower average weights than those caught later in Chignik Lagoon (Table 5-6).

1993 Management

A total of 229,459 coho salmon were harvested in the CMA in 1993, the fourth largest harvest on record. This catch was about 60,000 fish more than the harvest projection of 169,000 fish (Tables 3 and 8; Figure 15). The projected harvest is related to the strength of the Chignik Lake sockeye run. The lagoon and outside catches are based on a 10-year average. Coho catches were reported through mid-September in the Chignik Bay District, with a peak catch of 8,700 fish on September 5 (Table 5).

No estimates of escapement in the Chignik Lakes system were available because the weir was removed prior to the start of the coho run, and aerial survey counts were limited. Aerial surveys of the Eastern District streams in early September were nonexistent due to inclement weather conditions. Overall, escapement monitoring of coho salmon in the Chignik Area is sporadic due to the late timing of the run and logistics involved in monitoring the many streams in the area.

The exvessel value of the CMA coho harvest was \$730,632 (Table 9; Figure 6). The average value per permit holder was \$7,163 (Table 9; Figure 7).

Subsistence Salmon Fisheries

The CMA includes the mostly Native villages of Chignik, Chignik Lake, Chignik Lagoon, Perryville and Ivanof Bay, which rely heavily on local resources for subsistence. Salmon subsistence permits are issued to people in these villages through the Kodiak and Chignik ADF&G offices, Village Public Safety Officers, and Subsistence personnel on assignment from the Anchorage ADF&G office. In 1993, 67% of the Chignik Area subsistence permits issued were returned with harvest data. Subsistence harvests were estimated by expanding results from returned permits relative to total number of permits issued. In 1993, the CMA harvest was estimated at 122 chinook, 14,769 sockeye, 3,706 coho, 1,265 pink, and 642 chum salmon (Table 49).

1994 Season Outlook

The total 1994 salmon harvest projection of 3,600,000 fish is approximately 700,000 higher than the 1984-93 average of 2,893,643 salmon (Table 8; Appendix H). Harvest projections for chinook (7,000) and coho (200,000) salmon approximates the 1984-93 averages, while the projected sockeye harvest (1,900,000) is 300,000 higher than the 10 year average. The pink salmon projection of 1,300,000 is approximately 400,000 higher than the past 10 year average, while for chum salmon, the projection of 200,000 is about 16,000 fish above the past 10 year average.

Special Research Projects

Video Counting Feasibility Study

On August 12, 1993, an underwater video system was installed at the west bank counting gate on the Chignik River Weir. The system was operated from August 12 through August 14, 1993, to determine the feasibility of using video technology to increase the number of counting hours from 16 to 24. The best location for quality images from the video camera proved to be under the water surface directly above the fish as they passed through the counting gate.

The Chignik River was semi-turbid (five feet visibility) when the system was installed on August 12. Two locations for the video camera were tested. The first camera location viewed the lateral side of the fish as they went through the counting gate. The second position was about six inches below the water surface directly above the flash panel of the counting gate.

The first position (lateral) was accomplished by securing the camera to a stake that was pounded into the river substrate. The camera was located mid-way in the water column directly perpendicular to fish passage. A 4 foot by 8 foot painted (white) plywood sheet was secured opposite the camera to provide a uniform colored background for the recordings. Recording

quality was poor from this camera position because light was absorbed and refracted by the turbid water.

With the camera in the second position (overhead), image quality was comparable to that of the human eye view from the catwalk, except during periods when the water surface was choppy or extremely turbid (runoff from an erupting volcano, Mount Veniaminof) when the image from the camera was superior to that by human eye from the catwalk.

The precision of counts from the catwalk and from video were compared over ten minute counting periods. The video counts were one to two fish more accurate than visual counts from the catwalk. A complete video unit will be purchased and used throughout the 1994 Chignik salmon season.

Area Catch Comparison Study

A special research project outlining the historical fishery in the Chignik Lagoon Management Area (from 1974) comparing catches in the Chignik Lagoon District to other districts, was presented to the 1993 Chignik Management Advisory Committee.

The project's purpose was to address questions forwarded by the Chignik Seiners Association intended to clarify a subsistence board proposal brought before the Advisory Committee.

Conclusions: It appears that the sockeye fishery has changed from a fishery primarily conducted in the Chignik Lagoon to a fishery that is prosecuted primarily in Chignik Lagoon and Central District with minor increases in the other districts (Appendix I).

CHIGNIK HERRING FISHERIES

Background

The earliest recorded herring fishery in the Alaska Peninsula region was in 1906. During the early herring fishery, Chignik area catches were combined with catches from North and South Peninsula areas and labeled as Southwestern Alaska catches. Annual Southwestern Alaska herring catches did not exceed 500 tons. Herring were harvested with beach seines and marketed as a salted product. The herring fishery ceased in the late 1930's and did not commence again until 1980, with the sac roe herring fishery.

Since 1980, the Chignik area sac roe herring fishery has been a low effort, low yield fishery (Figure 16). Prior to 1984, harvests were concentrated in the Big River Section of the Eastern District. This area was closed to commercial herring fishing in 1985 and has remained closed to protect depressed stocks. This closure shifted effort into other areas of the CMA.

Herring spawning schools that are in small geographic areas, generally a bay or lagoon, are managed as discrete stocks. The projected annual harvest for each of these stocks is dependent on the previous year biomass estimates at an exploitation rate of 0-20% (Appendix J-K).

Preseason harvest projections may differ from actual harvest levels if inseason information suggests that the spawning biomass of a discrete stock differs significantly from anticipated levels.

1993 Management

There was no commercial sac roe herring fishing effort in the 1993 season, apparently, because of low abundance levels and a reluctance of processors to purchase local herring.

LITERATURE CITED

- Burgner, R. and S. Marshall, 1974. Optimum escapement studies of Chignik sockeye salmon. University of Washington, Fisheries Research Institute, Project Report AFC-34, Segment 3, Seattle.
- Barrett, B.M. and B. Monkiewicz, 1989. A survey of the Chignik Management Area salmon fishing grounds for oil spill contaminants, 11 June to 22 September 1989. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K89-28, Kodiak.
- Conrad, R.H. 1983. Management applications of scale pattern analysis methods for the sockeye salmon runs to Chignik, Alaska. M.S. Thesis, Univ. Washington, Seattle.
- Dahlberg, M.L. 1968. Analysis of the dynamics of sockeye salmon returns to Chignik Lakes, Alaska. Ph.D. dissertation. Univ. Washington, Seattle.
- Johnson, B.A. and B. Barrett. 1988. Estimation of salmon escapement based on stream survey data: a geometric approach. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K88-35, Kodiak.
- Lechner, J. 1969. Identification of red salmon stocks taken in the Cape Kumlik-Aniakchak Bay fishery, Chignik Area, 1967. Alaska Department of Fish and Game, Division of Commercial Fisheries. Informational Leaflet 133, Juneau.
- McCullough, James N. 1992. Southeastern District Mainland (Alaska Peninsula Area) Salmon Management Plan, 1992. Alaska Department of Fish and Game, RIR no. 4K92-4, Kodiak.
- Narver, D.W. 1966. Pelagial ecology and carrying capacity of sockeye salmon in the Chignik Lakes, Alaska. Ph.D. dissertation, Univ. Washington, Seattle.

Table 1. Chignik Management Area active permit holders, 1993.

| | Name | | Permit No. | Residency | Vessel Name | ADF&G No. |
|----|-------------|----------|-------------|-----------|-----------------|-----------|
| 1 | ALECK | NICK | S01L56935 J | R | TIFFANY NICHOLE | 54974 |
| 2 | ALEXANDER | JASON | S01L59000 W | R | CAPTAIN JAY | 21757 |
| 3 | ANDERSON | AARON | S01L56203 | R | VENTURE | 33848 |
| 4 | ANDERSON | AL | S01L57160 U | R | ALYSA JUNE | 61634 |
| 5 | ANDERSON | DAVID | S01L56415 U | R | GYPSY LADY | 61550 |
| 6 | ANDERSON | DEAN | S01L60114 M | NR | SIERRA GALE | 60913 |
| 7 | ANDERSON | EUGENE | S01L60601 G | R | RAY MAR | 31492 |
| 8 | ANDERSON | GEORGE | S01L57133 E | R | ALICE A | 33375 |
| 9 | ANDERSON | GUNNAR | S01L56589 I | R | SUMMER GALE | 55804 |
| 10 | ANDERSON | H. | S01L57501 K | R | JANET LYNNE | 53370 |
| 11 | ANDERSON | JULIUS | S01L55433 H | R | CHRISTINA J | 41205 |
| 12 | ANDERSON | MARVIN | S01L58425 P | R | DOLPHIN | 29063 |
| 13 | ANDERSON | RODNEY | S01L56936 B | R | ENDURANCE | 64123 |
| 14 | ASTOR | CRAIG | S01L59794 I | R | DREAMER | 41317 |
| 15 | BECK | MARK | S01L55925 M | NR | COLUMBIA | 56222 |
| 16 | BECKER | CARL | S01L57469 C | NR | VICTORIA | 51091 |
| 17 | BRANDAL | ALEC | S01L55170 U | R | ALEXANDRIA | 32586 |
| 18 | BRANDAL | HENRY | S01L50032 K | R | JOSEPH BOONEY | 58670 |
| 19 | BROWN | MALCOLM | S01L55938 M | R | DESIDERATA | 41160 |
| 20 | BUMPUS | DONALD | S01L61910 L | NR | DESIDERATA | 41160 |
| 21 | CAMPBELL | DANIEL | S01L55731 X | NR | JULIE ANN | 40262 |
| 22 | CARLSON | AXEL | S01L57612 J | R | MISS MARIT | 35863 |
| 23 | CARLSON | BERNARD | S01L50220 U | R | MISS SHANNON | 37231 |
| 24 | CARLSON | CARL | S01L56192 Z | R | AARON C | 21898 |
| 25 | CARLSON | DALE | S01L57473 V | R | LADY DIANE | 43370 |
| 26 | CARLSON | ERIC | S01L62210 Z | R | ERICA RAE | 33957 |
| 27 | CARLSON | ERNEST | S01L57125 P | R | DESPERADO | 43775 |
| 28 | CARLSON | EUGENE | S01L55520 P | R | MEGA SEA | 61606 |
| 29 | CARLSON | RODERICK | S01L57704 F | R | KANAK | 43197 |
| 30 | CARLSON | RUDY | S01L63976 A | R | AIMEE NICOLE | 22017 |
| 31 | CARROLL | ALBERT | S01L60106 Z | NR | NORTHERN VIKING | 36731 |
| 32 | CONSTANTINE | JOHNNY | S01L57808 I | R | ORIOLE | 15888 |
| 33 | CRONK | GLEN | S01L58603 C | NR | ROYAL LADY | 38635 |
| 34 | ENDRESEN | ANDY | S01L60183 F | R | PROVIDER | 17124 |
| 35 | ERICKSON | CLARENCE | S01L56512 B | R | SHARON LEE | 53266 |
| 36 | GREGORIO | TONY | S01L58848 X | R | ANTOINETTE RENA | 37548 |
| 37 | GRUNERT | CLEMENS | S01L50332 | R | ADVENTURESS | 42335 |
| 38 | GRUNERT | FRANK | S01L59851 X | R | KURT ELDON | 61416 |
| 39 | GRUNERT | MICHAEL | S01L55935 K | R | CAPT 'N SAM | 59482 |
| 40 | HARDEN | JERRI | S01L58578 | NR | MARKAY | 01873 |
| 41 | HINDERER | RAEHEL | S01L57376 O | R | ILLUSION | 10567 |
| 42 | HINDERER | WALLACE | S01L57085 S | R | RAEHEL LOUISE | 41592 |
| 43 | JOHNSON | PAUL | S01L56395 S | NR | SUSAN RAE | 35956 |
| 44 | JONES | MORRIS | S01L56405 W | NR | ISLANDER | 39275 |
| 45 | KALMAKOFF | HARVEY | S01L50090 M | R | OCEAN SPRAY | 23636 |
| 46 | KALMAKOFF | JOSEPH | S01L60614 | R | SEA-ROGUE | 11017 |
| 47 | KASHEVAROF | WILLIAM | S01L57487 N | R | CHRISTINE K | 54242 |
| 48 | KOPUN | ALOYS | S01L57863 I | R | KAREY GALE | 45995 |
| 49 | KOSBRUK | BORIS | S01L58206 U | R | LADY EVELYN | 43200 |
| 50 | KOSBRUK | HARRY | S01L56726 L | R | SAINT HERMAN | 38528 |
| 51 | KOSBRUK | IVAN | S01L50116 R | R | JERILYN DEE | 45060 |
| 52 | KULIN | STEPHEN | S01L60113 U | R | KRITARKA | 63151 |
| 53 | LIND | ELIA | S01L57384 C | R | ANITA MARIE | 62031 |
| 54 | LIND | ELLIOT | S01L56872 | R | LISA MARIE | 35950 |
| 55 | LIND | JOHNNY | S01L50223 W | R | LAURA JUNE | 28396 |
| 56 | LOUNSBURY | BRETT | S01L58322 F | R | KARMA | 31995 |
| 57 | MCCALLUM | CHARLES | S01L55399 O | NR | GYPSY QUEEN | 32397 |
| 58 | MCKILLY | GABRIEL | S01L59493 O | R | DOROTHY-M | 32863 |

-Continued-

Table 1. (page 2 of 2)

| | Name | | Permit No. | Residency | Vessel Name | ADF&G No. |
|-----|--------------|----------|-------------|-----------|-----------------|-----------|
| 59 | MOORE | JEFFREY | S01L61370 V | R | DANA CHERIE | 61384 |
| 60 | MORGAN | JERRY | S01L50045 | R | PRINCESS DANETT | 00117 |
| 61 | ODOMIN | NICK | S01L57696 L | R | ELLA-MAE | 00195 |
| 62 | OGLE | LEONARD | S01L55311 R | R | CHALLENGE | 61706 |
| 63 | OLSEN | GARRETT | S01L58496 R | NR | ABSOLUT | 21877 |
| 64 | OLSEN | JEFFREY | S01L60115 | NR | JESSICA MARIE | 00111 |
| 65 | OLSEN | KNUD | S01L56418 W | NR | HEIDI LINEA | 55822 |
| 66 | ORLOFF | GEORGE | S01L59308 M | R | MARJONETTE | 57946 |
| 67 | PEDERSEN | ALEC | S01L57695 S | R | DIANA | 51282 |
| 68 | PEDERSEN | ALEC | S01L64188 M | R | LOIS ANN | 58196 |
| 69 | PEDERSEN | ALVIN | S01L55953 V | R | MILLIE JO | 37662 |
| 70 | PEDERSEN | ARTHUR | S01L55954 N | R | FAST LADY | 48823 |
| 71 | PEDERSEN | AUGUST | S01L50039 H | R | SHARON ANN | 59642 |
| 72 | PEDERSEN | HANS | S01L57171 K | R | SUSIE LYNN | 40248 |
| 73 | PEDERSEN | MARIUS | S01L64187 U | R | KAISHA LENA | 57465 |
| 74 | PLETNIKOFF | ROBERT | S01L58077 F | R | RITA MARIA | 35986 |
| 75 | SHANGIN | ANDY | S01L58145 K | R | SHARON DAWN | 39351 |
| 76 | SHANGIN | CLEMENT | S01L56733 H | R | MISS CLEMENTINE | 38622 |
| 77 | SHANGIN | DENNIS | S01L58178 G | R | MIRANDA LEIGH | 21899 |
| 78 | SHANGIN | EDGAR | S01L50123 | R | NICOLE DANIELLE | 21554 |
| 79 | SHANGIN | RUSSELL | S01L57003 B | R | AMBER NICOLE | 56291 |
| 80 | SHANGIN | STEPHEN | S01L52949 | R | REBECCA MAY | 11013 |
| 81 | SIEMION | MATTHEW | S01L56992 S | NR | SEA BREEZE | 32361 |
| 82 | SIEMION | THEODORE | S01L56322 H | NR | OUTSIDER | 20453 |
| 83 | SIMPSON | DWIGHT | S01L58818 | R | RONALD ROSS | 57480 |
| 84 | SKONBERG | BERNARD | S01L55477 R | R | CARMALEE | 33858 |
| 85 | SKONBERG | CALVIN | S01L56228 C | R | ROSALIE | 34184 |
| 86 | SKONBERG | DARRELL | S01L55546 P | R | ALASKA ROSE | 33614 |
| 87 | SKONBERG | GUY | S01L55361 H | R | MICHELLE LEE | 35698 |
| 88 | SKONBERG | RALPH | S01L50205 L | R | DAY DREAMER | 28657 |
| 89 | SKONBERG | ROY | S01L58470 R | R | AMY RAE | 42210 |
| 90 | STEPANOFF | ANDREW | S01L60144 G | R | LILY MARLENE | 00194 |
| 91 | STEPANOFF | ANDREW | S01L58126 | R | LAURA JUNE | 28396 |
| 92 | STEPANOFF | OLEANA | S01L58308 N | R | DESERT STORM | 38122 |
| 93 | STEPANOFF | SAM | S01L50338 P | R | SONIA FRANCINE | 33778 |
| 94 | STEPANOFF | WALTER | S01L57091 W | R | MIRACLE GIRL | 36629 |
| 95 | SUYDAM | GLENN | S01L59615 | R | ALEUT SON | 53205 |
| 96 | SUYDAM | LOWELL | S01L56680 K | R | STELLOR | 39962 |
| 97 | TAKAK | AFONIE | S01L57035 F | R | MISS DEIDRE | 21859 |
| 98 | TEUBER | PAUL | S01L60121 I | NR | SONDRA | 55545 |
| 99 | VANWINGERDEN | MARK | S01L57296 B | R | KARISSE DAWN | 58817 |
| 100 | VEERHUSEN | DANIEL | S01L57662 X | R | SHADY LADY | 59377 |
| 101 | YAGIE | JERRY | S01L56797 N | R | NORTHWIND | 36296 |
| 102 | YAGIE | MARVIN | S01L57278 P | R | MAXINE | 54909 |

Table 2. Chignik Management Area fishers' residentiary status, 1966-1993.

| Year | Residentiary Status | | | | Total |
|------|---------------------|---------|--------------|---------|-------|
| | Resident | Percent | Non-Resident | Percent | |
| 1966 | 65 | 89.0 | 8 | 11.0 | 73 |
| 1967 | 73 | 88.0 | 10 | 12.0 | 83 |
| 1968 | 59 | 88.1 | 8 | 11.9 | 67 |
| 1969 | 57 | 83.8 | 11 | 16.2 | 68 |
| 1970 | 57 | 82.6 | 12 | 17.4 | 69 |
| 1971 | 64 | 83.1 | 13 | 16.9 | 77 |
| 1972 | 62 | 78.5 | 17 | 21.5 | 79 |
| 1973 | 63 | 81.8 | 14 | 18.2 | 77 |
| 1974 | 79 | 84.0 | 15 | 16.0 | 94 |
| 1975 | 72 | 83.7 | 14 | 16.3 | 86 |
| 1976 | 66 | 85.7 | 11 | 14.3 | 77 |
| 1977 | 74 | 84.1 | 14 | 15.9 | 88 |
| 1978 | 82 | 86.3 | 13 | 13.7 | 95 |
| 1979 | 87 | 86.1 | 14 | 13.9 | 101 |
| 1980 | 87 | 86.1 | 14 | 13.9 | 101 |
| 1981 | 87 | 84.5 | 16 | 15.5 | 103 |
| 1982 | 89 | 84.8 | 16 | 15.2 | 105 |
| 1983 | 84 | 84.0 | 16 | 16.0 | 100 |
| 1984 | 84 | 83.2 | 17 | 16.8 | 101 |
| 1985 | 85 | 84.2 | 16 | 15.8 | 101 |
| 1986 | 87 | 87.0 | 13 | 13.0 | 100 |
| 1987 | 89 | 87.3 | 13 | 12.7 | 102 |
| 1988 | 88 | 86.3 | 14 | 13.7 | 102 |
| 1989 | 86 | 84.3 | 16 | 15.7 | 102 |
| 1990 | 85 | 84.2 | 16 | 15.8 | 101 |
| 1991 | 85 | 83.0 | 18 | 17.0 | 103 |
| 1992 | 84 | 84.0 | 17 | 17.0 | 101 |
| 1993 | 85 | 83.3 | 17 | 16.7 | 102 |

Table 3. Chignik Management Area commercial salmon catches by district, statistical area, and species, 1993.

| District | Stat Area | Chinook | Sockeye | Coho | Pink | Chum | Total |
|-------------|-----------|---------|-----------|---------|-----------|---------|-----------|
| Chignik Bay | 27110 | 5,240 | 762,730 | 48,808 | 55,909 | 8,116 | 880,803 |
| | Total | 5,240 | 762,730 | 48,808 | 55,909 | 8,116 | 880,803 |
| Central | 27220 | 945 | 4,816 | 8,725 | 38,817 | 2,513 | 55,816 |
| | 27230 | 2,851 | 306,310 | 13,782 | 77,057 | 23,422 | 423,421 |
| | 27240 | 160 | 1,839 | 1,815 | 2,781 | 320 | 6,915 |
| | 27250 | 1,041 | 111,701 | 5,281 | 29,814 | 10,137 | 157,974 |
| | 27262 | 1,814 | 130,446 | 6,382 | 49,994 | 6,635 | 195,271 |
| | Total | 6,811 | 555,112 | 35,985 | 198,463 | 43,027 | 839,398 |
| Eastern | 27260 | 1,357 | 106,656 | 2,817 | 13,937 | 2,434 | 127,201 |
| | 27264 | 54 | 1,908 | 436 | 6,574 | 279 | 9,251 |
| | 27272 | 0 | 106 | 107 | 128 | 12 | 353 |
| | 27280 | 9 | 145 | 36 | 14,622 | 2,575 | 17,387 |
| | 27290 | 0 | 218 | 60 | 10,772 | 1,521 | 12,571 |
| | 27292 | 1,202 | 79,239 | 1,220 | 13,296 | 14,615 | 109,572 |
| | Total | 2,622 | 188,272 | 4,676 | 59,329 | 21,436 | 276,335 |
| Western | 27374 | 229 | 5,544 | 15,473 | 233,031 | 5,651 | 259,928 |
| | 27380 | 0 | 66 | 138 | 3,913 | 27 | 4,144 |
| | 27384 | 3 | 288 | 249 | 443 | 100 | 1,083 |
| | 27390 | 2,341 | 42,510 | 54,982 | 366,265 | 16,302 | 482,400 |
| | 27394 | 540 | 5,643 | 13,214 | 81,953 | 2,965 | 104,315 |
| | Total | 3,113 | 54,051 | 84,056 | 685,605 | 25,045 | 851,870 |
| Perryville | 27540 | 1,310 | 126,046 | 51,870 | 547,157 | 22,027 | 748,410 |
| | 27550 | 419 | 11,140 | 4,064 | 101,914 | 2,709 | 120,246 |
| | Total | 1,729 | 137,186 | 55,934 | 649,071 | 24,736 | 868,656 |
| Grand Total | | 19,515 | 1,697,351 | 229,459 | 1,648,377 | 122,360 | 3,717,062 |

Table 4. Chignik Management Area commercial salmon catch and effort by day, 1993.

| Date MM/DD | Fishing Effort | | Chinook | | Sockeye | | Coho | | Pink | | Chum | | Total | Total |
|--------------------|----------------|----------|---------|--------|---------|---------|--------|---------|---------|---------|--------|--------|---------|---------|
| | Permits | Landings | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds |
| 06/09 ^a | 1 | 1 | 0 | 0 | 695 | 4,408 | 0 | 0 | 0 | 0 | 0 | 0 | 695 | 4,408 |
| 06/10 ^a | 1 | 1 | 0 | 0 | 947 | 5,905 | 0 | 0 | 0 | 0 | 0 | 0 | 947 | 5,905 |
| 06/12 ^a | 1 | 1 | 0 | 0 | 1,660 | 10,478 | 0 | 0 | 0 | 0 | 0 | 0 | 1,660 | 10,478 |
| 06/15 ^a | 1 | 1 | 0 | 0 | 2,059 | 12,990 | 0 | 0 | 0 | 0 | 0 | 0 | 2,059 | 12,990 |
| 06/17 | 3 | 3 | 0 | 0 | 6,541 | 42,045 | 0 | 0 | 0 | 0 | 0 | 0 | 6,541 | 42,045 |
| 06/19 | 58 | 59 | 43 | 605 | 26,134 | 161,094 | 0 | 0 | 12 | 25 | 2 | 13 | 26,191 | 161,737 |
| 06/20 | 88 | 119 | 187 | 2,551 | 64,707 | 380,716 | 2 | 10 | 188 | 422 | 694 | 4,309 | 65,778 | 388,008 |
| 06/21 | 85 | 105 | 298 | 4,215 | 64,443 | 370,934 | 5 | 22 | 281 | 782 | 938 | 5,955 | 65,965 | 381,908 |
| 06/22 | 88 | 102 | 362 | 5,200 | 77,129 | 433,482 | 13 | 93 | 785 | 2,100 | 2,014 | 12,730 | 80,303 | 453,605 |
| 06/23 | 87 | 104 | 360 | 5,322 | 56,473 | 332,515 | 13 | 136 | 727 | 1,796 | 2,123 | 12,789 | 59,696 | 352,558 |
| 06/24 | 91 | 101 | 540 | 6,873 | 90,580 | 509,914 | 37 | 207 | 1,262 | 3,624 | 4,885 | 30,670 | 97,304 | 551,288 |
| 06/25 | 94 | 103 | 597 | 7,992 | 71,787 | 407,367 | 59 | 344 | 1,336 | 3,273 | 6,227 | 35,465 | 80,006 | 454,441 |
| 06/26 | 84 | 88 | 392 | 6,309 | 69,336 | 398,009 | 33 | 164 | 1,016 | 2,506 | 2,385 | 14,458 | 73,162 | 421,446 |
| 06/27 | 86 | 89 | 403 | 5,567 | 51,494 | 300,325 | 71 | 396 | 1,017 | 2,541 | 5,902 | 35,099 | 58,887 | 343,928 |
| 06/28 | 86 | 89 | 238 | 3,434 | 35,841 | 210,485 | 91 | 491 | 952 | 2,359 | 2,754 | 15,412 | 39,876 | 232,181 |
| 06/30 | 83 | 86 | 366 | 6,360 | 43,944 | 268,999 | 196 | 1,116 | 955 | 2,312 | 761 | 4,463 | 46,222 | 283,250 |
| 07/01 | 76 | 87 | 521 | 10,045 | 47,587 | 282,507 | 126 | 679 | 1,784 | 4,145 | 995 | 5,622 | 51,013 | 302,998 |
| 07/02 | 90 | 94 | 391 | 6,768 | 55,248 | 329,715 | 195 | 1,125 | 1,769 | 4,350 | 1,526 | 8,943 | 59,129 | 350,901 |
| 07/03 | 83 | 94 | 494 | 7,716 | 53,598 | 318,997 | 317 | 1,773 | 2,609 | 6,121 | 2,060 | 12,439 | 59,078 | 347,046 |
| 07/04 | 86 | 93 | 367 | 5,327 | 37,751 | 227,563 | 311 | 1,615 | 2,126 | 5,345 | 1,797 | 10,463 | 42,352 | 250,313 |
| 07/07 | 71 | 71 | 398 | 6,742 | 39,483 | 255,811 | 1,244 | 6,951 | 1,519 | 4,607 | 1,009 | 5,897 | 43,653 | 280,008 |
| 07/08 | 94 | 112 | 1,129 | 15,161 | 92,330 | 582,273 | 9,096 | 55,283 | 13,006 | 34,514 | 4,819 | 27,401 | 120,380 | 714,632 |
| 07/09 | 93 | 110 | 1,452 | 17,461 | 77,451 | 476,230 | 10,484 | 61,277 | 19,593 | 49,901 | 5,525 | 34,976 | 114,505 | 639,845 |
| 07/10 | 85 | 95 | 2,137 | 20,949 | 57,475 | 358,350 | 14,743 | 90,788 | 19,331 | 50,425 | 6,850 | 41,106 | 100,536 | 561,618 |
| 07/11 | 88 | 92 | 1,495 | 14,809 | 54,757 | 336,072 | 10,320 | 61,136 | 14,883 | 38,666 | 5,763 | 34,510 | 87,218 | 485,193 |
| 07/12 | 84 | 90 | 1,134 | 11,523 | 44,427 | 280,432 | 7,120 | 39,319 | 7,368 | 20,201 | 2,826 | 15,564 | 62,875 | 367,039 |
| 07/13 | 80 | 83 | 401 | 5,007 | 44,980 | 291,538 | 3,268 | 20,086 | 6,894 | 17,449 | 2,677 | 16,026 | 58,220 | 350,106 |
| 07/14 | 86 | 87 | 512 | 5,357 | 29,259 | 187,516 | 1,758 | 10,783 | 4,300 | 12,126 | 1,557 | 10,020 | 37,386 | 225,802 |
| 07/15 | 82 | 84 | 614 | 6,055 | 25,743 | 163,601 | 3,120 | 18,232 | 5,383 | 14,621 | 1,161 | 6,666 | 36,021 | 209,175 |
| 07/16 | 90 | 95 | 871 | 7,255 | 27,021 | 167,768 | 6,109 | 35,318 | 7,014 | 20,400 | 1,180 | 7,279 | 42,195 | 238,020 |
| 07/20 | 25 | 25 | 23 | 279 | 6,242 | 40,033 | 111 | 655 | 914 | 2,733 | 131 | 827 | 7,421 | 44,527 |
| 07/21 | 65 | 72 | 102 | 1,296 | 19,047 | 120,696 | 3,515 | 21,283 | 19,145 | 53,013 | 1,384 | 8,263 | 43,193 | 204,551 |
| 07/22 | 81 | 83 | 333 | 3,386 | 30,512 | 191,902 | 10,434 | 65,534 | 40,099 | 119,309 | 2,262 | 14,267 | 83,640 | 394,398 |
| 07/23 | 93 | 102 | 543 | 5,199 | 41,287 | 259,372 | 21,573 | 135,927 | 94,789 | 287,366 | 6,939 | 44,094 | 165,131 | 731,958 |
| 07/24 | 82 | 92 | 350 | 3,285 | 28,883 | 189,891 | 8,396 | 49,222 | 51,412 | 158,841 | 3,509 | 22,712 | 92,550 | 423,951 |
| 07/25 | 71 | 75 | 254 | 2,555 | 23,608 | 152,668 | 3,022 | 19,011 | 17,103 | 51,282 | 1,010 | 6,488 | 44,997 | 232,004 |
| 07/26 | 73 | 75 | 251 | 2,481 | 22,508 | 143,030 | 4,880 | 30,466 | 26,428 | 81,286 | 1,553 | 10,124 | 55,620 | 267,387 |
| 07/28 ^a | 1 | 1 | 14 | 65 | 83 | 450 | 356 | 2,024 | 1,826 | 5,539 | 57 | 300 | 2,336 | 8,378 |
| 07/29 | 47 | 47 | 154 | 1,780 | 5,095 | 32,809 | 8,429 | 53,450 | 124,227 | 390,675 | 2,474 | 17,671 | 140,379 | 496,385 |
| 07/30 | 53 | 56 | 233 | 2,192 | 6,961 | 42,728 | 8,959 | 53,521 | 123,830 | 407,248 | 2,583 | 14,766 | 142,566 | 520,455 |
| 07/31 | 63 | 68 | 505 | 4,672 | 8,011 | 48,205 | 12,761 | 79,866 | 206,556 | 670,746 | 4,662 | 30,233 | 232,495 | 833,722 |
| 08/02 | 62 | 63 | 55 | 816 | 8,798 | 53,405 | 859 | 5,252 | 11,262 | 36,184 | 498 | 3,119 | 21,472 | 98,776 |
| 08/03 | 82 | 84 | 139 | 1,542 | 12,448 | 76,091 | 1,790 | 11,062 | 34,406 | 111,646 | 1,458 | 8,361 | 50,241 | 208,702 |
| 08/04 | 77 | 82 | 125 | 1,521 | 10,706 | 65,749 | 1,760 | 10,719 | 36,311 | 117,462 | 1,354 | 7,134 | 50,256 | 202,585 |

-Continued-

Table 4. (page 2 of 2)

| Date MM/DD | Fishing Effort | | Chinook | | Sockeye | | Coho | | Pink | | Chum | | Total | Total |
|----------------|----------------|----------|---------|---------|-----------|------------|---------|-----------|-----------|-----------|---------|---------|---------|---------|
| | Permits | Landings | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds |
| 08/05 | 73 | 73 | 53 | 577 | 8,162 | 48,746 | 857 | 4,930 | 21,089 | 69,465 | 803 | 4,623 | 30,964 | 128,341 |
| 08/10 | 25 | 26 | 10 | 141 | 2,106 | 12,530 | 1,863 | 10,863 | 41,588 | 134,303 | 1,363 | 8,511 | 46,930 | 166,348 |
| 08/11 | 81 | 91 | 253 | 3,100 | 12,211 | 71,318 | 9,957 | 60,879 | 216,263 | 734,347 | 4,903 | 29,468 | 243,587 | 899,112 |
| 08/12 | 75 | 81 | 85 | 947 | 10,737 | 64,270 | 5,230 | 32,329 | 160,420 | 545,552 | 3,066 | 17,839 | 179,538 | 660,937 |
| 08/13 | 54 | 56 | 25 | 248 | 7,395 | 45,241 | 1,696 | 10,567 | 66,961 | 239,670 | 1,627 | 9,423 | 77,704 | 305,149 |
| 08/16 | 74 | 80 | 28 | 400 | 8,490 | 51,164 | 3,696 | 23,184 | 69,881 | 231,684 | 2,495 | 14,575 | 84,590 | 321,007 |
| 08/17 | 68 | 71 | 33 | 395 | 8,925 | 54,829 | 3,913 | 24,105 | 67,357 | 228,617 | 3,401 | 19,168 | 83,629 | 327,114 |
| 08/18 | 30 | 30 | 5 | 105 | 5,591 | 35,744 | 819 | 4,949 | 16,934 | 60,358 | 893 | 5,080 | 24,242 | 106,236 |
| 08/19 | 38 | 38 | 18 | 228 | 3,003 | 18,306 | 1,770 | 11,199 | 22,711 | 70,954 | 1,104 | 6,522 | 28,606 | 107,209 |
| 08/23 | 46 | 47 | 3 | 30 | 7,450 | 45,757 | 279 | 1,770 | 2,507 | 8,070 | 324 | 1,646 | 10,563 | 57,273 |
| 08/24 | 51 | 53 | 7 | 114 | 8,063 | 49,478 | 2,949 | 20,092 | 31,704 | 106,708 | 1,561 | 8,877 | 44,284 | 185,269 |
| 08/25 | 43 | 44 | 6 | 88 | 6,453 | 39,167 | 2,696 | 18,031 | 12,803 | 41,419 | 842 | 4,884 | 22,800 | 103,589 |
| 08/26 | 39 | 39 | 26 | 334 | 6,015 | 36,415 | 3,184 | 21,018 | 12,571 | 40,921 | 1,157 | 5,992 | 22,953 | 104,680 |
| 08/30 | 46 | 46 | 15 | 223 | 5,326 | 31,858 | 1,958 | 13,597 | 817 | 2,639 | 288 | 1,585 | 8,404 | 49,902 |
| 08/31 | 35 | 37 | 10 | 125 | 5,587 | 33,782 | 1,496 | 11,091 | 344 | 1,128 | 96 | 546 | 7,533 | 46,672 |
| 09/02 | 31 | 31 | 0 | 0 | 6,457 | 39,078 | 1,769 | 12,813 | 0 | 0 | 32 | 170 | 8,258 | 52,061 |
| 09/05 | 27 | 27 | 0 | 0 | 3,391 | 20,496 | 8,697 | 68,508 | 0 | 0 | 21 | 112 | 12,109 | 89,116 |
| 09/06 | 25 | 25 | 0 | 0 | 1,207 | 7,120 | 4,109 | 32,093 | 0 | 0 | 18 | 86 | 5,334 | 39,299 |
| 09/07 | 19 | 19 | 0 | 0 | 1,462 | 8,316 | 3,480 | 27,549 | 0 | 0 | 23 | 117 | 4,965 | 35,982 |
| 09/13 | 24 | 25 | 155 | 1,526 | 1,665 | 9,334 | 6,813 | 53,815 | 9 | 21 | 34 | 165 | 8,676 | 64,861 |
| 09/14 | 19 | 19 | 0 | 0 | 1,458 | 8,324 | 3,239 | 25,963 | 0 | 0 | 5 | 24 | 4,702 | 34,311 |
| 09/15 | 19 | 19 | 0 | 0 | 1,128 | 6,291 | 3,413 | 26,563 | 0 | 0 | 0 | 0 | 4,541 | 32,854 |
| Total | 102 | 4,241 | 19,515 | 234,253 | 1,697,351 | 10,262,632 | 229,459 | 1,461,244 | 1,648,377 | 5,313,797 | 122,360 | 736,047 | | |
| Average Weight | | | | 12.01 | | 6.05 | | 6.37 | | 3.22 | | 6.02 | | |

^a Deliveries from test fishery.

Table 5. Chignik Management Area commercial salmon catch and effort^a by statistical area and day, 1993.

| Stat Area | Date MM/DD | Fishing Effort | | Chinook | | Sockeye | | Coho | | Pink | | Chum | | Total | |
|-----------|--------------------|----------------|----------|---------|--------|---------|---------|--------|--------|--------|--------|--------|--------|--------|---------|
| | | Permits | Landings | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds |
| 27110 | 06/09 ^b | 1 | 1 | 0 | 0 | 695 | 4,408 | 0 | 0 | 0 | 0 | 0 | 0 | 695 | 4,408 |
| | 06/10 ^b | 1 | 1 | 0 | 0 | 947 | 5,905 | 0 | 0 | 0 | 0 | 0 | 0 | 947 | 5,905 |
| | 06/12 ^b | 1 | 1 | 0 | 0 | 1,660 | 10,478 | 0 | 0 | 0 | 0 | 0 | 0 | 1,660 | 10,478 |
| | 06/15 ^b | 1 | 1 | 0 | 0 | 2,059 | 12,990 | 0 | 0 | 0 | 0 | 0 | 0 | 2,059 | 12,990 |
| | 06/17 | 3 | 3 | 0 | 0 | 6,541 | 42,045 | 0 | 0 | 0 | 0 | 0 | 0 | 6,541 | 42,045 |
| | 06/19 | 57 | 57 | 23 | 390 | 24,598 | 152,599 | 0 | 0 | 0 | 0 | 0 | 0 | 24,621 | 152,989 |
| | 06/20 | 71 | 84 | 67 | 1,314 | 43,250 | 256,762 | 0 | 0 | 5 | 10 | 0 | 0 | 43,322 | 258,086 |
| | 06/21 | 56 | 74 | 69 | 1,361 | 34,780 | 200,674 | 0 | 0 | 19 | 40 | 9 | 47 | 34,877 | 202,122 |
| | 06/22 | 50 | 56 | 91 | 1,764 | 21,056 | 122,579 | 0 | 0 | 0 | 0 | 297 | 1,970 | 21,444 | 126,313 |
| | 06/23 | 56 | 67 | 109 | 2,358 | 21,361 | 124,421 | 0 | 0 | 30 | 131 | 79 | 463 | 21,579 | 127,373 |
| | 06/24 | 47 | 52 | 73 | 1,674 | 19,451 | 113,299 | 3 | 17 | 6 | 24 | 3 | 15 | 19,536 | 115,029 |
| | 06/25 | 45 | 50 | 115 | 2,485 | 21,039 | 123,104 | 0 | 0 | 0 | 0 | 2 | 12 | 21,156 | 125,601 |
| | 06/26 | 42 | 45 | 172 | 3,665 | 25,987 | 155,942 | 0 | 0 | 2 | 5 | 1 | 3 | 26,162 | 159,615 |
| | 06/27 | 44 | 45 | 96 | 1,869 | 19,835 | 118,766 | 0 | 0 | 0 | 0 | 21 | 138 | 19,952 | 120,773 |
| | 06/28 | 44 | 44 | 101 | 1,552 | 12,891 | 77,458 | 29 | 162 | 91 | 201 | 830 | 4,319 | 13,942 | 83,692 |
| | 06/30 | 54 | 55 | 184 | 3,993 | 23,995 | 148,273 | 23 | 145 | 57 | 126 | 3 | 18 | 24,262 | 152,555 |
| | 07/01 | 45 | 46 | 349 | 7,648 | 16,432 | 99,058 | 12 | 52 | 246 | 601 | 14 | 90 | 17,053 | 107,449 |
| | 07/02 | 50 | 52 | 224 | 4,633 | 22,864 | 137,048 | 95 | 500 | 576 | 1,416 | 146 | 769 | 23,905 | 144,366 |
| | 07/03 | 50 | 55 | 263 | 4,888 | 17,188 | 100,535 | 187 | 1,007 | 542 | 1,281 | 125 | 708 | 18,305 | 108,419 |
| | 07/04 | 50 | 50 | 156 | 3,343 | 9,424 | 56,868 | 163 | 752 | 180 | 475 | 120 | 677 | 10,043 | 62,115 |
| | 07/07 | 48 | 48 | 239 | 5,183 | 27,913 | 181,758 | 0 | 0 | 0 | 0 | 8 | 47 | 28,160 | 186,988 |
| | 07/08 | 45 | 56 | 337 | 6,926 | 38,608 | 247,273 | 32 | 117 | 41 | 102 | 3 | 15 | 39,021 | 254,433 |
| | 07/09 | 41 | 46 | 256 | 4,065 | 18,066 | 111,814 | 606 | 3,133 | 1,015 | 2,253 | 23 | 119 | 19,966 | 121,384 |
| | 07/10 | 33 | 35 | 466 | 5,007 | 18,419 | 112,273 | 1,372 | 7,635 | 935 | 2,362 | 210 | 1,089 | 21,402 | 128,366 |
| | 07/11 | 34 | 35 | 386 | 3,762 | 19,678 | 123,028 | 1,656 | 9,027 | 938 | 2,302 | 368 | 2,119 | 23,026 | 140,238 |
| | 07/12 | 39 | 42 | 193 | 2,036 | 19,492 | 123,565 | 1,168 | 6,439 | 708 | 1,953 | 205 | 998 | 21,766 | 134,991 |
| | 07/13 | 47 | 50 | 204 | 3,151 | 22,346 | 145,338 | 607 | 3,441 | 722 | 2,076 | 445 | 2,438 | 24,324 | 156,444 |
| | 07/14 | 56 | 56 | 211 | 2,689 | 12,185 | 77,419 | 214 | 1,247 | 249 | 587 | 69 | 383 | 12,928 | 82,325 |
| | 07/15 | 44 | 46 | 137 | 1,646 | 10,551 | 67,507 | 888 | 5,081 | 423 | 1,139 | 75 | 431 | 12,074 | 75,804 |
| | 07/16 | 49 | 52 | 225 | 1,824 | 11,141 | 70,104 | 1,952 | 10,738 | 849 | 2,226 | 76 | 517 | 14,243 | 85,409 |
| | 07/20 | 24 | 24 | 8 | 181 | 5,775 | 37,038 | 1 | 6 | 21 | 53 | 5 | 27 | 5,810 | 37,305 |
| | 07/21 | 46 | 51 | 21 | 398 | 11,254 | 71,272 | 419 | 2,512 | 685 | 2,116 | 137 | 677 | 12,516 | 76,975 |
| | 07/22 | 44 | 45 | 26 | 509 | 17,258 | 108,826 | 608 | 3,475 | 913 | 2,773 | 93 | 507 | 18,898 | 116,090 |
| | 07/23 | 48 | 51 | 51 | 790 | 17,058 | 108,528 | 559 | 3,162 | 1,423 | 4,326 | 103 | 702 | 19,194 | 117,508 |
| | 07/24 | 38 | 38 | 19 | 272 | 13,258 | 85,330 | 134 | 725 | 343 | 1,005 | 69 | 398 | 13,823 | 87,730 |
| | 07/25 | 50 | 51 | 40 | 440 | 17,069 | 109,668 | 710 | 4,353 | 2,636 | 8,672 | 210 | 1,302 | 20,665 | 124,435 |
| | 07/26 | 48 | 50 | 27 | 384 | 14,856 | 94,771 | 96 | 597 | 297 | 866 | 53 | 340 | 15,329 | 96,958 |
| | 08/02 | 48 | 49 | 33 | 558 | 8,197 | 49,929 | 217 | 1,383 | 3,222 | 10,117 | 181 | 1,192 | 11,850 | 63,179 |
| | 08/03 | 55 | 56 | 45 | 555 | 9,224 | 55,775 | 569 | 3,618 | 8,946 | 29,089 | 604 | 3,333 | 19,388 | 92,370 |
| | 08/04 | 44 | 45 | 17 | 243 | 7,411 | 44,898 | 97 | 568 | 4,859 | 15,614 | 130 | 689 | 12,514 | 62,012 |
| | 08/05 | 43 | 43 | 6 | 48 | 5,817 | 34,659 | 137 | 749 | 2,568 | 8,222 | 169 | 955 | 8,697 | 44,633 |
| | 08/10 | 8 | 9 | 1 | 17 | 1,420 | 8,751 | 18 | 111 | 386 | 1,197 | 22 | 125 | 1,847 | 10,201 |
| | 08/11 | 27 | 33 | 15 | 209 | 7,579 | 45,150 | 98 | 578 | 2,334 | 7,373 | 246 | 1,326 | 10,272 | 54,636 |
| | 08/12 | 26 | 32 | 9 | 141 | 6,824 | 41,237 | 151 | 907 | 2,813 | 8,957 | 433 | 2,153 | 10,230 | 53,395 |
| | 08/13 | 27 | 29 | 3 | 24 | 5,256 | 32,300 | 5 | 33 | 1,755 | 5,796 | 251 | 1,311 | 7,270 | 39,464 |
| | 08/16 | 35 | 36 | 8 | 168 | 5,908 | 35,790 | 112 | 689 | 1,991 | 6,300 | 233 | 1,287 | 8,252 | 44,234 |

-Continued-

Table 5. (page 2 of 10)

| Stat Area | Date MM/DD | Fishing Effort | | Chinook | | Sockeye | | Coho | | Pink | | Chum | | Total | |
|-----------|----------------|----------------|----------|---------|--------|---------|-----------|--------|---------|--------|---------|--------|--------|---------|-----------|
| | | Permits | Landings | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds |
| 27110 | 08/17 | 40 | 41 | 3 | 56 | 6,621 | 40,362 | 184 | 1,203 | 3,823 | 12,613 | 491 | 2,579 | 11,122 | 56,813 |
| | 08/18 | 25 | 25 | 0 | 0 | 4,663 | 29,252 | 58 | 360 | 1,359 | 4,432 | 228 | 1,121 | 6,308 | 35,165 |
| | 08/19 | 23 | 23 | 0 | 0 | 2,314 | 14,535 | 29 | 184 | 732 | 2,366 | 128 | 706 | 3,203 | 17,791 |
| | 08/23 | 46 | 47 | 3 | 30 | 7,450 | 45,757 | 279 | 1,770 | 2,507 | 8,070 | 324 | 1,646 | 10,563 | 57,273 |
| | 08/24 | 29 | 29 | 0 | 0 | 6,050 | 37,020 | 261 | 1,658 | 1,628 | 5,218 | 252 | 1,246 | 8,191 | 45,142 |
| | 08/25 | 31 | 31 | 3 | 47 | 5,528 | 33,693 | 682 | 4,546 | 1,445 | 4,594 | 224 | 1,138 | 7,882 | 44,018 |
| | 08/26 | 29 | 29 | 0 | 0 | 4,437 | 27,065 | 412 | 2,727 | 1,093 | 3,673 | 145 | 778 | 6,087 | 34,243 |
| | 08/30 | 37 | 37 | 1 | 26 | 4,922 | 29,497 | 1,310 | 8,995 | 283 | 883 | 75 | 347 | 6,591 | 39,748 |
| | 08/31 | 33 | 35 | 0 | 0 | 5,361 | 32,446 | 1,135 | 8,110 | 204 | 678 | 45 | 291 | 6,745 | 41,525 |
| | 09/02 | 31 | 31 | 0 | 0 | 6,457 | 39,078 | 1,769 | 12,813 | 0 | 0 | 32 | 170 | 8,258 | 52,061 |
| | 09/05 | 27 | 27 | 0 | 0 | 3,391 | 20,496 | 8,697 | 68,508 | 0 | 0 | 21 | 112 | 12,109 | 89,116 |
| | 09/06 | 25 | 25 | 0 | 0 | 1,207 | 7,120 | 4,109 | 32,093 | 0 | 0 | 18 | 86 | 5,334 | 39,299 |
| | 09/07 | 19 | 19 | 0 | 0 | 1,462 | 8,316 | 3,480 | 27,549 | 0 | 0 | 23 | 117 | 4,965 | 35,982 |
| | 09/13 | 24 | 25 | 155 | 1,526 | 1,665 | 9,334 | 6,813 | 53,815 | 9 | 21 | 34 | 165 | 8,676 | 64,861 |
| | 09/14 | 19 | 19 | 0 | 0 | 1,458 | 8,324 | 3,239 | 25,963 | 0 | 0 | 5 | 24 | 4,702 | 34,311 |
| | 09/15 | 19 | 19 | 0 | 0 | 1,128 | 6,291 | 3,413 | 26,563 | 0 | 0 | 0 | 0 | 4,541 | 32,854 |
| | Totals | 89 | 2,409 | 5,240 | 85,848 | 762,730 | 4,675,799 | 48,808 | 349,816 | 55,909 | 174,334 | 8,116 | 44,235 | 880,803 | 5,330,032 |
| | Average Weight | | | | 16.38 | | 6.13 | | 7.17 | | 3.12 | | 5.45 | | |
| 27220 | 06/28 | | | 33 | 460 | 571 | 2,701 | 29 | 160 | 122 | 280 | 188 | 935 | 943 | 4,536 |
| | 07/09 | | | 138 | 1,068 | 617 | 2,632 | 371 | 1,931 | 627 | 1,497 | 105 | 560 | 1,858 | 7,688 |
| | 07/11 | | | 211 | 1,786 | 283 | 1,370 | 321 | 1,700 | 350 | 866 | 105 | 521 | 1,270 | 6,243 |
| | 07/12 | | | 233 | 1,624 | 702 | 3,662 | 1,474 | 7,816 | 433 | 995 | 176 | 948 | 3,018 | 15,045 |
| | 07/14 | | | 3 | 20 | 171 | 998 | 146 | 798 | 131 | 334 | 42 | 244 | 493 | 2,394 |
| | 07/15 | | | 4 | 50 | 53 | 258 | 184 | 1,033 | 80 | 230 | 21 | 111 | 342 | 1,682 |
| | 07/16 | 4 | 4 | 170 | 1,305 | 388 | 2,152 | 1,181 | 6,972 | 407 | 1,175 | 81 | 467 | 2,227 | 12,071 |
| | 07/22 | | | 6 | 49 | 337 | 1,943 | 531 | 2,929 | 392 | 1,114 | 59 | 284 | 1,325 | 6,319 |
| | 07/23 | | | 19 | 175 | 251 | 1,409 | 536 | 3,121 | 1,417 | 4,353 | 90 | 468 | 2,313 | 9,526 |
| | 07/26 | 3 | 3 | 43 | 430 | 297 | 1,926 | 1,627 | 11,001 | 7,359 | 22,633 | 435 | 2,877 | 9,761 | 38,867 |
| | 08/02 | 9 | 9 | 10 | 113 | 230 | 1,154 | 470 | 2,785 | 5,971 | 18,885 | 227 | 1,358 | 6,908 | 24,295 |
| | 08/03 | 6 | 6 | 41 | 293 | 217 | 1,216 | 593 | 3,508 | 8,546 | 28,730 | 366 | 1,960 | 9,763 | 35,707 |
| | 08/04 | 13 | 14 | 18 | 209 | 349 | 1,816 | 783 | 4,813 | 7,283 | 23,109 | 372 | 2,106 | 8,805 | 32,053 |
| | 08/05 | 10 | 10 | 16 | 159 | 299 | 1,601 | 353 | 1,980 | 4,413 | 14,059 | 203 | 1,228 | 5,284 | 19,027 |
| | 08/12 | | | 0 | 0 | 51 | 211 | 126 | 793 | 1,142 | 3,843 | 41 | 197 | 1,360 | 5,044 |
| | 08/17 | | | 0 | 0 | 0 | 0 | 0 | 0 | 144 | 465 | 2 | 14 | 146 | 479 |
| | Totals | 24 | 61 | 945 | 7,741 | 4,816 | 25,049 | 8,725 | 51,340 | 38,817 | 122,568 | 2,513 | 14,278 | 55,816 | 220,976 |
| | Average Weight | | | | 8.19 | | 5.20 | | 5.88 | | 3.16 | | 5.68 | | |

-Continued-

Table 5. (page 3 of 10)

| Stat Area | Date MM/DD | Fishing Effort | | Chinook | | Sockeye | | Coho | | Pink | | Chum | | Total | |
|----------------|------------|----------------|----------|---------|--------|---------|-----------|---------|--------|--------|---------|--------|---------|---------|-----------|
| | | Permits | Landings | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds |
| 23 | 27/230 | 06/20 | 10 | 16 | 37 | 394 | 8,206 | 48,615 | | 12 | 35 | 258 | 1,630 | 8,513 | 50,674 |
| | | 06/21 | 13 | 15 | 87 | 1,122 | 10,016 | 60,774 | 1 | 6 | 61 | 164 | 598 | 3,782 | 10,763 |
| | | 06/22 | 21 | 25 | 136 | 1,820 | 23,264 | 136,200 | 12 | 86 | 297 | 853 | 1,066 | 6,836 | 24,775 |
| | | 06/23 | 19 | 21 | 75 | 849 | 12,543 | 74,890 | 11 | 122 | 248 | 561 | 1,023 | 6,087 | 13,900 |
| | | 06/24 | 22 | 23 | 151 | 1,981 | 24,253 | 140,345 | 24 | 131 | 521 | 1,653 | 1,953 | 12,285 | 26,902 |
| | | 06/25 | 17 | 20 | 91 | 1,014 | 9,455 | 55,834 | 8 | 76 | 71 | 189 | 977 | 6,139 | 10,602 |
| | | 06/26 | 15 | 15 | 14 | 183 | 8,315 | 51,137 | 3 | 16 | 121 | 364 | 396 | 2,398 | 8,849 |
| | | 06/27 | 14 | 15 | 59 | 762 | 7,579 | 45,148 | 35 | 178 | 119 | 274 | 1,038 | 6,174 | 8,830 |
| | | 06/28 | 19 | 22 | 42 | 439 | 9,853 | 59,989 | 5 | 24 | 75 | 192 | 1,038 | 6,230 | 11,013 |
| | | 06/30 | 9 | 9 | 26 | 347 | 6,014 | 38,357 | 2 | 19 | 22 | 52 | 168 | 1,007 | 6,232 |
| | | 07/01 | 13 | 20 | 44 | 700 | 16,203 | 96,298 | 10 | 56 | 481 | 1,197 | 545 | 3,016 | 17,283 |
| | | 07/02 | 19 | 20 | 43 | 506 | 14,998 | 90,181 | 35 | 203 | 240 | 605 | 552 | 3,275 | 15,868 |
| | | 07/03 | 12 | 15 | 57 | 643 | 12,439 | 75,909 | 5 | 35 | 190 | 521 | 981 | 5,856 | 13,672 |
| | | 07/04 | 21 | 23 | 48 | 437 | 15,165 | 92,931 | 42 | 232 | 540 | 1,348 | 963 | 5,590 | 16,758 |
| | | 07/07 | 12 | 12 | 20 | 365 | 6,847 | 44,421 | 46 | 254 | 357 | 982 | 338 | 1,960 | 7,608 |
| | | 07/08 | 17 | 20 | 95 | 1,180 | 15,231 | 98,205 | 373 | 2,134 | 1,931 | 4,557 | 891 | 4,622 | 18,521 |
| | | 07/09 | 12 | 14 | 102 | 943 | 12,357 | 78,503 | 222 | 1,229 | 657 | 1,834 | 855 | 5,434 | 14,193 |
| | | 07/10 | 14 | 18 | 278 | 2,547 | 11,197 | 74,818 | 1,414 | 8,791 | 1,526 | 4,076 | 1,065 | 6,695 | 15,480 |
| | | 07/11 | 18 | 19 | 124 | 1,366 | 9,097 | 58,903 | 708 | 4,366 | 1,237 | 3,090 | 1,416 | 7,840 | 12,582 |
| | | 07/12 | 15 | 16 | 185 | 1,752 | 7,207 | 44,967 | 1,144 | 6,476 | 1,214 | 3,383 | 858 | 4,850 | 10,608 |
| | | 07/13 | 17 | 17 | 102 | 989 | 11,311 | 75,424 | 704 | 4,399 | 2,044 | 5,233 | 970 | 5,836 | 15,131 |
| | | 07/14 | 19 | 19 | 99 | 917 | 9,079 | 59,320 | 643 | 3,852 | 1,513 | 4,286 | 774 | 5,145 | 12,108 |
| | | 07/15 | 23 | 23 | 285 | 2,467 | 9,520 | 60,928 | 1,104 | 6,382 | 1,615 | 4,799 | 563 | 3,180 | 13,087 |
| | | 07/16 | 28 | 28 | 295 | 2,291 | 10,131 | 66,381 | 1,177 | 6,905 | 2,194 | 6,790 | 724 | 4,307 | 14,521 |
| | | 07/20 | | | 15 | 98 | 467 | 2,995 | 110 | 649 | 893 | 2,680 | 126 | 800 | 1,611 |
| | | 07/21 | 13 | 13 | 48 | 529 | 5,397 | 33,883 | 884 | 5,299 | 9,011 | 24,583 | 877 | 5,246 | 16,217 |
| | | 07/22 | 9 | 9 | 24 | 233 | 1,626 | 10,169 | 655 | 3,306 | 2,584 | 7,980 | 301 | 2,027 | 5,190 |
| | | 07/23 | | | 6 | 93 | 792 | 4,944 | 191 | 1,054 | 1,151 | 3,516 | 135 | 779 | 2,275 |
| | | 07/24 | 11 | 13 | 53 | 483 | 6,016 | 39,790 | 886 | 5,389 | 5,412 | 16,867 | 415 | 2,516 | 12,782 |
| | | 07/25 | 16 | 18 | 64 | 623 | 4,821 | 31,508 | 1,382 | 8,485 | 8,311 | 24,642 | 459 | 2,974 | 15,037 |
| | | 07/26 | 11 | 11 | 30 | 274 | 2,132 | 13,942 | 636 | 3,670 | 3,519 | 10,827 | 209 | 1,480 | 6,526 |
| | | 08/02 | | | 5 | 62 | 82 | 476 | 28 | 176 | 499 | 1,850 | 6 | 51 | 620 |
| | | 08/03 | 8 | 8 | 27 | 334 | 1,413 | 9,065 | 251 | 1,568 | 7,252 | 22,705 | 127 | 810 | 9,070 |
| | | 08/04 | 12 | 13 | 69 | 745 | 1,893 | 12,562 | 588 | 3,529 | 14,487 | 47,659 | 487 | 2,526 | 17,524 |
| | | 08/05 | 13 | 13 | 13 | 143 | 975 | 6,035 | 215 | 1,297 | 6,652 | 23,161 | 220 | 1,230 | 8,075 |
| | | 08/30 | | | 0 | 0 | 214 | 1,297 | 109 | 824 | 0 | 0 | 30 | 128 | 353 |
| | | 08/31 | | | 2 | 25 | 202 | 1,216 | 118 | 935 | 0 | 0 | 20 | 95 | 342 |
| Totals | | 52 | 551 | 2,851 | 29,656 | 306,310 | 1,896,360 | 13,781 | 82,153 | 77,057 | 233,508 | 23,422 | 140,836 | 423,421 | 2,382,513 |
| Average Weight | | | | | 10.40 | | 6.19 | | 5.96 | | 3.03 | | 6.01 | | |

-Continued-

Table 5. (page 4 of 10)

| Stat Area | Date MM/DD | Fishing Effort | | Chinook | | Sockeye | | Coho | | Pink | | Chum | | Total | |
|-----------|----------------|----------------|----------|---------|--------|---------|---------|--------|--------|--------|--------|--------|--------|---------|---------|
| | | Permits | Landings | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds |
| 27240 | 06/25 | | | 2 | 15 | 250 | 1,636 | | | | | 14 | 114 | 266 | 1,765 |
| | 07/15 | | | 69 | 490 | 221 | 1,380 | 203 | 1,320 | 176 | 490 | 115 | 600 | 784 | 4,280 |
| | 07/16 | | | 68 | 547 | 756 | 4,514 | 1,168 | 7,035 | 1,288 | 3,225 | 100 | 700 | 3,380 | 16,021 |
| | 07/22 | | | 17 | 83 | 549 | 3,270 | 388 | 2,336 | 931 | 3,023 | 38 | 214 | 1,923 | 8,926 |
| | 07/24 | | | 4 | 60 | 63 | 360 | 56 | 320 | 386 | 1,140 | 53 | 300 | 562 | 2,180 |
| | Totals | 7 | 7 | 160 | 1,195 | 1,839 | 11,160 | 1,815 | 11,011 | 2,781 | 7,878 | 320 | 1,928 | 6,915 | 33,172 |
| | Average Weight | | | | 7.47 | | 6.07 | | 6.07 | | 2.83 | | 6.03 | | |
| 27250 | 06/20 | 9 | 15 | 34 | 482 | 8,052 | 46,325 | 2 | 10 | 64 | 128 | 201 | 1,306 | 8,353 | 48,251 |
| | 06/21 | 4 | 4 | 17 | 286 | 3,164 | 17,308 | 4 | 16 | 54 | 131 | 54 | 328 | 3,293 | 18,069 |
| | 06/22 | | | 25 | 160 | 2,506 | 15,882 | 0 | 0 | 0 | 0 | 142 | 896 | 2,673 | 16,938 |
| | 06/23 | 3 | 3 | 13 | 233 | 2,269 | 11,964 | 0 | 0 | 0 | 0 | 130 | 947 | 2,412 | 13,144 |
| | 06/24 | 6 | 6 | 20 | 279 | 6,040 | 29,289 | 4 | 27 | 5 | 10 | 269 | 1,651 | 6,338 | 31,256 |
| | 06/25 | 9 | 9 | 57 | 915 | 10,841 | 64,419 | 46 | 244 | 550 | 1,121 | 1,022 | 6,243 | 12,516 | 72,942 |
| | 06/26 | 7 | 7 | 66 | 718 | 8,284 | 49,238 | 5 | 24 | 400 | 910 | 1,360 | 8,365 | 10,115 | 59,255 |
| | 06/27 | 9 | 9 | 56 | 587 | 10,476 | 61,535 | 16 | 96 | 334 | 754 | 1,880 | 11,092 | 12,762 | 74,064 |
| | 06/28 | 6 | 6 | 7 | 146 | 3,120 | 17,869 | 15 | 78 | 221 | 496 | 419 | 2,358 | 3,782 | 20,947 |
| | 06/30 | 8 | 9 | 57 | 749 | 4,474 | 27,486 | 76 | 451 | 385 | 866 | 427 | 2,526 | 5,419 | 32,078 |
| | 07/01 | 7 | 8 | 38 | 531 | 4,601 | 28,251 | 45 | 271 | 331 | 691 | 309 | 1,786 | 5,324 | 31,530 |
| | 07/02 | 7 | 7 | 46 | 561 | 8,935 | 52,912 | 24 | 147 | 535 | 1,344 | 628 | 3,685 | 10,168 | 58,649 |
| | 07/03 | 7 | 8 | 26 | 268 | 9,997 | 64,187 | 84 | 522 | 625 | 1,583 | 590 | 3,801 | 11,322 | 70,361 |
| | 07/04 | 4 | 4 | 52 | 480 | 5,851 | 35,228 | 52 | 297 | 631 | 1,507 | 273 | 1,762 | 6,859 | 39,274 |
| | 07/09 | 8 | 12 | 148 | 1,467 | 8,614 | 55,125 | 207 | 1,327 | 930 | 2,850 | 700 | 4,411 | 10,599 | 65,180 |
| | 07/10 | 4 | 4 | 18 | 227 | 2,305 | 14,225 | 126 | 691 | 237 | 700 | 251 | 1,255 | 2,937 | 17,098 |
| | 07/11 | | | 30 | 252 | 765 | 5,031 | 106 | 561 | 110 | 318 | 140 | 847 | 1,151 | 7,009 |
| | 07/13 | | | 0 | 0 | 312 | 1,951 | 16 | 104 | 60 | 135 | 41 | 230 | 429 | 2,420 |
| | 07/14 | 3 | 3 | 32 | 298 | 1,665 | 10,540 | 95 | 585 | 282 | 803 | 86 | 557 | 2,160 | 12,783 |
| | 07/15 | 3 | 3 | 13 | 124 | 1,271 | 8,114 | 111 | 685 | 188 | 514 | 36 | 199 | 1,619 | 9,636 |
| | 07/16 | 3 | 4 | 19 | 279 | 2,155 | 9,980 | 251 | 1,538 | 548 | 1,475 | 40 | 266 | 3,013 | 13,538 |
| | 07/22 | | | 17 | 144 | 583 | 3,916 | 661 | 3,837 | 3,361 | 10,087 | 110 | 686 | 4,732 | 18,670 |
| | 07/23 | 3 | 3 | 101 | 897 | 2,123 | 12,220 | 1,195 | 6,046 | 5,653 | 13,663 | 290 | 1,716 | 9,362 | 34,542 |
| | 07/24 | | | 18 | 153 | 237 | 4,867 | 255 | 1,583 | 2,228 | 7,355 | 120 | 758 | 2,858 | 14,716 |
| | 07/25 | | | 75 | 833 | 1,001 | 7,014 | 693 | 4,257 | 4,287 | 12,864 | 217 | 1,397 | 6,273 | 26,365 |
| | 07/26 | 5 | 5 | 33 | 307 | 1,542 | 10,174 | 910 | 5,670 | 5,647 | 15,970 | 298 | 1,838 | 8,430 | 33,959 |
| | 08/02 | | | 6 | 66 | 213 | 1,406 | 115 | 727 | 1,311 | 4,534 | 62 | 392 | 1,707 | 7,125 |
| | 08/03 | | | 10 | 116 | 133 | 803 | 95 | 558 | 306 | 1,010 | 9 | 35 | 553 | 2,522 |
| | 08/05 | | | 7 | 91 | 172 | 987 | 72 | 415 | 531 | 1,653 | 33 | 185 | 815 | 3,331 |
| | Totals | 30 | 143 | 1,041 | 11,649 | 111,701 | 668,246 | 5,281 | 30,767 | 29,814 | 83,472 | 10,137 | 61,518 | 157,974 | 855,652 |
| | Average Weight | | | | 11.19 | | 5.98 | | 5.83 | | 2.80 | | 6.07 | | |

-Continued-

Table 5. (page 5 of 10)

| Stat Area | Date MM/DD | Fishing Effort | | Chinook | | Sockeye | | Coho | | Pink | | Chum | | Total | |
|-----------|----------------|----------------|----------|---------|--------|---------|---------|--------|--------|--------|--------|--------|--------|---------|---------|
| | | Permits | Landings | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds |
| 27260 | 06/19 | | | 20 | 215 | 1,536 | 8,495 | 0 | 0 | 12 | 25 | 2 | 13 | 1,570 | 8,748 |
| | 06/20 | | | 0 | 0 | 196 | 1,012 | 0 | 0 | 0 | 0 | 0 | | 196 | 1,012 |
| | 06/21 | 8 | 8 | 60 | 883 | 6,935 | 36,061 | 0 | 0 | 4 | 7 | 44 | 217 | 7,043 | 37,168 |
| | 06/22 | 10 | 10 | 58 | 804 | 10,902 | 59,445 | 1 | 7 | 80 | 196 | 45 | 301 | 11,086 | 60,753 |
| | 06/23 | 7 | 7 | 48 | 653 | 9,151 | 56,359 | 0 | 0 | 214 | 525 | 307 | 1,934 | 9,720 | 59,471 |
| | 06/24 | 13 | 14 | 240 | 2,407 | 21,365 | 115,809 | 6 | 32 | 184 | 464 | 96 | 537 | 21,891 | 119,249 |
| | 06/25 | 12 | 12 | 154 | 1,696 | 13,257 | 72,769 | 0 | 0 | 47 | 105 | 38 | 257 | 13,496 | 74,827 |
| | 06/26 | 12 | 13 | 61 | 750 | 16,563 | 86,087 | 0 | 0 | 227 | 430 | 49 | 220 | 16,900 | 87,487 |
| | 06/27 | 9 | 9 | 55 | 887 | 4,694 | 24,928 | 0 | 0 | 74 | 164 | 36 | 221 | 4,859 | 26,200 |
| | 06/28 | 7 | 7 | 26 | 464 | 4,073 | 22,222 | 0 | 0 | 75 | 242 | 35 | 289 | 4,209 | 23,217 |
| | 07/07 | | | 30 | 277 | 114 | 707 | 47 | 284 | 25 | 57 | 4 | 27 | 220 | 1,352 |
| | 07/08 | | | 79 | 730 | 2,922 | 18,415 | 323 | 1,829 | 707 | 1,560 | 265 | 1,595 | 4,296 | 24,129 |
| | 07/09 | 4 | 4 | 56 | 670 | 2,872 | 18,028 | 253 | 1,480 | 266 | 676 | 108 | 587 | 3,555 | 21,441 |
| | 07/10 | 4 | 4 | 178 | 1,693 | 2,829 | 18,686 | 274 | 1,488 | 225 | 534 | 175 | 986 | 3,681 | 23,387 |
| | 07/11 | | | 9 | 96 | 1,115 | 7,805 | 107 | 644 | 40 | 96 | 47 | 284 | 1,318 | 8,925 |
| | 07/12 | | | 107 | 1,215 | 1,530 | 10,719 | 161 | 969 | 85 | 185 | 83 | 534 | 1,966 | 13,622 |
| | 07/15 | | | 22 | 255 | 394 | 1,963 | 127 | 544 | 227 | 463 | 14 | 91 | 784 | 3,316 |
| | 07/21 | | | 25 | 296 | 811 | 5,249 | 138 | 861 | 700 | 1,481 | 88 | 547 | 1,762 | 8,434 |
| | 07/22 | 3 | 3 | 37 | 349 | 1,830 | 11,704 | 523 | 3,044 | 2,065 | 5,863 | 316 | 1,917 | 4,771 | 22,877 |
| | 07/24 | 7 | 7 | 78 | 699 | 2,728 | 17,918 | 726 | 4,225 | 5,592 | 16,915 | 568 | 3,309 | 9,692 | 43,066 |
| | 07/29 | | | 5 | 51 | 254 | 2,053 | 115 | 811 | 2,145 | 4,587 | 58 | 408 | 2,577 | 7,910 |
| | 07/30 | | | 2 | 28 | 497 | 2,620 | 8 | 47 | 693 | 1,823 | 45 | 278 | 1,245 | 4,796 |
| | 07/31 | | | 7 | 120 | 88 | 490 | 8 | 40 | 250 | 880 | 11 | 80 | 364 | 1,610 |
| | Totals | 24 | 113 | 1,357 | 15,238 | 106,656 | 599,544 | 2,817 | 16,305 | 13,937 | 37,278 | 2,434 | 14,632 | 127,201 | 682,997 |
| | Average Weight | | | | 11.23 | | 5.62 | | 5.79 | | 2.67 | | 6.01 | | 31 |
| 27262 | 06/20 | | | 15 | 135 | 2,540 | 13,949 | 0 | 0 | 90 | 211 | 10 | 65 | 2,655 | 14,360 |
| | 06/21 | 3 | 3 | 55 | 432 | 6,962 | 40,598 | 0 | 0 | 82 | 197 | 48 | 354 | 7,147 | 41,581 |
| | 06/22 | | | 1 | 10 | 2,028 | 10,429 | 0 | 0 | 14 | 28 | 34 | 234 | 2,077 | 10,701 |
| | 06/23 | 4 | 4 | 92 | 861 | 7,890 | 47,348 | 2 | 14 | 235 | 579 | 303 | 1,953 | 8,522 | 50,755 |
| | 06/24 | | | 22 | 201 | 1,612 | 9,378 | 0 | 0 | 18 | 48 | 18 | 142 | 1,670 | 9,769 |
| | 06/25 | 5 | 5 | 48 | 509 | 6,192 | 33,672 | 5 | 24 | 81 | 245 | 94 | 288 | 6,420 | 34,738 |
| | 06/26 | 6 | 6 | 75 | 923 | 9,918 | 54,179 | 24 | 119 | 241 | 722 | 105 | 672 | 10,363 | 56,615 |
| | 06/27 | 6 | 6 | 26 | 375 | 6,197 | 34,419 | 9 | 61 | 214 | 618 | 87 | 529 | 6,533 | 36,002 |
| | 06/28 | 9 | 9 | 29 | 373 | 5,333 | 30,246 | 13 | 67 | 368 | 948 | 244 | 1,281 | 5,987 | 32,915 |
| | 06/30 | 12 | 13 | 99 | 1,271 | 9,461 | 54,883 | 95 | 501 | 491 | 1,268 | 163 | 912 | 10,309 | 58,835 |
| | 07/01 | 12 | 13 | 90 | 1,166 | 10,351 | 58,900 | 59 | 300 | 726 | 1,656 | 127 | 730 | 11,353 | 62,752 |
| | 07/02 | 14 | 15 | 78 | 1,068 | 8,451 | 49,574 | 41 | 275 | 418 | 985 | 200 | 1,214 | 9,188 | 53,116 |
| | 07/03 | 14 | 16 | 148 | 1,917 | 13,974 | 78,366 | 41 | 209 | 1,252 | 2,736 | 364 | 2,074 | 15,779 | 85,302 |
| | 07/04 | 14 | 16 | 111 | 1,067 | 7,311 | 42,536 | 54 | 334 | 775 | 2,015 | 441 | 2,434 | 8,692 | 48,386 |
| | 07/07 | | | 3 | 47 | 74 | 469 | 0 | 0 | 0 | 0 | 0 | 0 | 77 | 516 |
| | 07/08 | 4 | 5 | 77 | 711 | 2,582 | 16,064 | 219 | 1,138 | 471 | 1,090 | 112 | 613 | 3,461 | 19,616 |

-Continued-

Table 5. (page 6 of 10)

| Stat Area | Date MM/DD | Fishing Effort | | Chinook | | Sockeye | | Coho | | Pink | | Chum | | Total | |
|-----------|----------------|----------------|----------|---------|--------|---------|---------|--------|--------|--------|---------|--------|--------|---------|-----------|
| | | Permits | Landings | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds |
| 27262 | 07/10 | | | 31 | 376 | 1,229 | 8,116 | 146 | 754 | 90 | 260 | 75 | 448 | 1,571 | 9,954 |
| | 07/11 | | | 34 | 253 | 1,653 | 10,673 | 153 | 824 | 139 | 339 | 79 | 421 | 2,058 | 12,510 |
| | 07/12 | 4 | 4 | 119 | 1,086 | 2,374 | 15,440 | 422 | 2,146 | 95 | 241 | 204 | 1,065 | 3,214 | 19,978 |
| | 07/13 | 6 | 6 | 50 | 462 | 1,592 | 10,055 | 96 | 481 | 172 | 447 | 153 | 957 | 2,063 | 12,402 |
| | 07/14 | 7 | 7 | 164 | 1,403 | 5,409 | 34,527 | 498 | 3,281 | 550 | 1,550 | 474 | 2,961 | 7,095 | 43,722 |
| | 07/15 | 7 | 7 | 84 | 1,023 | 3,733 | 23,451 | 503 | 3,187 | 2,674 | 6,986 | 337 | 2,054 | 7,331 | 36,701 |
| | 07/16 | 5 | 5 | 94 | 1,009 | 1,922 | 11,952 | 360 | 2,021 | 1,298 | 4,088 | 135 | 907 | 3,809 | 19,977 |
| | 07/22 | | | 4 | 67 | 1,258 | 7,395 | 290 | 1,686 | 1,087 | 3,444 | 108 | 607 | 2,747 | 13,199 |
| | 07/23 | 4 | 4 | 45 | 624 | 1,964 | 11,603 | 761 | 4,360 | 3,122 | 9,159 | 341 | 2,103 | 6,233 | 27,849 |
| | 07/24 | 4 | 4 | 29 | 329 | 1,179 | 6,926 | 314 | 1,905 | 2,163 | 7,219 | 923 | 6,699 | 4,608 | 23,078 |
| | 07/25 | | | 25 | 196 | 448 | 2,766 | 136 | 803 | 759 | 2,277 | 57 | 353 | 1,425 | 6,395 |
| | 07/26 | 5 | 5 | 118 | 1,086 | 3,382 | 20,703 | 1,528 | 9,071 | 8,070 | 25,668 | 538 | 3,509 | 13,636 | 60,037 |
| | 08/02 | | | 1 | 17 | 76 | 440 | 29 | 181 | 259 | 798 | 22 | 126 | 387 | 1,562 |
| | 08/03 | 12 | 12 | 16 | 244 | 1,461 | 9,232 | 282 | 1,810 | 9,356 | 30,112 | 352 | 2,223 | 11,467 | 43,621 |
| | 08/04 | 9 | 9 | 20 | 314 | 991 | 6,101 | 222 | 1,388 | 7,759 | 25,311 | 309 | 1,478 | 9,301 | 34,592 |
| | 08/05 | 6 | 6 | 11 | 136 | 899 | 5,464 | 80 | 489 | 6,925 | 22,370 | 178 | 1,025 | 8,093 | 29,484 |
| | Totals | 27 | 193 | 1,814 | 19,691 | 130,446 | 759,854 | 6,382 | 37,429 | 49,994 | 153,615 | 6,635 | 40,431 | 195,271 | 1,011,020 |
| | Average Weight | | | | 10.86 | | 5.83 | | 5.86 | | 3.07 | | 6.09 | | |
| 27264 | 07/14 | | | 3 | 30 | 750 | 4,712 | 162 | 1,020 | 1,575 | 4,566 | 112 | 730 | 2,602 | 11,058 |
| | 07/16 | | | 0 | 0 | 528 | 2,685 | 20 | 109 | 430 | 1,421 | 24 | 115 | 1,002 | 4,330 |
| | 07/25 | | | 50 | 463 | 269 | 1,712 | 101 | 1,113 | 1,110 | 2,827 | 67 | 462 | 1,597 | 6,577 |
| | 07/26 | | | 0 | 0 | 299 | 1,514 | 83 | 457 | 1,536 | 5,322 | 20 | 80 | 1,938 | 7,373 |
| | 08/04 | | | 1 | 10 | 62 | 372 | 70 | 421 | 1,923 | 5,769 | 56 | 335 | 2,112 | 6,907 |
| | Totals | 4 | 6 | 54 | 503 | 1,908 | 10,995 | 436 | 3,120 | 6,574 | 19,905 | 279 | 1,722 | 9,251 | 36,245 |
| | Average Weight | | | | 9.31 | | 5.76 | | 7.16 | | 3.03 | | 6.17 | | |
| 27272 | 07/24 | | | 0 | 0 | 106 | 520 | 107 | 625 | 128 | 812 | 12 | 70 | 353 | 2,027 |
| | Totals | | | 0 | 0 | 106 | 520 | 107 | 625 | 128 | 812 | 12 | 70 | 353 | 2,027 |
| | Average Weight | | | | | | 4.91 | | 5.84 | | 6.34 | | 5.83 | | |
| 27280 | 07/22 | | | 1 | 9 | 90 | 636 | 35 | 227 | 980 | 2,122 | 37 | 234 | 1,143 | 3,228 |
| | 07/23 | | | 6 | 56 | 5 | 37 | 0 | 0 | 580 | 1,457 | 1,105 | 7,826 | 1,696 | 9,376 |
| | 07/29 | | | 1 | 15 | 35 | 223 | 0 | 0 | 375 | 938 | 320 | 3,251 | 731 | 4,427 |
| | 07/30 | | | 1 | 15 | 12 | 71 | 0 | 0 | 62 | 149 | 70 | 637 | 145 | 872 |
| | 08/10 | | | 0 | 0 | 2 | 13 | 1 | 10 | 5,572 | 17,275 | 693 | 4,812 | 6,268 | 22,110 |
| | 08/11 | | | 0 | 0 | 1 | 10 | 0 | 0 | 7,053 | 21,161 | 350 | 2,986 | 7,404 | 24,157 |
| | Totals | 3 | 7 | 9 | 95 | 145 | 990 | 36 | 237 | 14,622 | 43,102 | 2,575 | 19,746 | 17,387 | 64,170 |
| | Average Weight | | | | 10.56 | | 6.83 | | 6.58 | | 2.95 | | 7.67 | | |

-Continued-

Table 5. (page 7 of 10)

| Stat Area | Date MM/DD | Fishing Effort | | Chinook | | Sockeye | | Coho | | Pink | | Chum | | Total | |
|-----------|--------------------|----------------|----------|---------|--------|---------|---------|--------|--------|---------|---------|--------|--------|---------|---------|
| | | Permits | Landings | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds |
| 27290 | 06/27 | | | 0 | 0 | 142 | 857 | 0 | 0 | 30 | 60 | 60 | 382 | 232 | 1,299 |
| | 07/31 | | | 0 | 0 | 6 | 40 | 0 | 0 | 7,475 | 24,409 | 1,430 | 10,237 | 8,911 | 34,686 |
| | 08/11 | | | 0 | 0 | 0 | 0 | 0 | 0 | 2,777 | 9,124 | 31 | 203 | 2,808 | 9,327 |
| | 08/26 | | | 0 | 0 | 70 | 490 | 60 | 420 | 490 | 1,543 | | | 620 | 2,453 |
| | Totals | 4 | 5 | 0 | 0 | 218 | 1,387 | 60 | 420 | 10,772 | 35,136 | 1,521 | 10,822 | 12,571 | 47,765 |
| | Average Weight | | | | | | 6.36 | | 7.00 | | 3.26 | | 7.12 | | |
| 27292 | 06/20 | | | 34 | 226 | 2,463 | 14,053 | 0 | 0 | 17 | 38 | 225 | 1,308 | 2,739 | 15,625 |
| | 06/21 | | | 10 | 131 | 2,586 | 15,519 | 0 | 0 | 61 | 243 | 185 | 1,227 | 2,842 | 17,120 |
| | 06/22 | 5 | 7 | 51 | 642 | 17,373 | 88,947 | 0 | 0 | 394 | 1,023 | 430 | 2,493 | 18,248 | 93,105 |
| | 06/23 | | | 23 | 368 | 3,259 | 17,533 | 0 | 0 | 0 | 0 | 281 | 1,405 | 3,563 | 19,306 |
| | 06/24 | 5 | 5 | 34 | 331 | 17,859 | 101,794 | 0 | 0 | 528 | 1,425 | 2,546 | 16,040 | 20,967 | 119,590 |
| | 06/25 | 6 | 6 | 130 | 1,358 | 10,753 | 55,933 | 0 | 0 | 587 | 1,613 | 4,080 | 22,412 | 15,550 | 81,316 |
| | 06/26 | | | 4 | 70 | 269 | 1,426 | 0 | 0 | 25 | 75 | 474 | 2,800 | 772 | 4,371 |
| | 06/27 | 4 | 4 | 111 | 1,087 | 2,571 | 14,672 | 11 | 61 | 246 | 671 | 2,780 | 16,563 | 5,719 | 33,054 |
| | 07/08 | 4 | 4 | 136 | 1,003 | 7,972 | 48,390 | 156 | 926 | 974 | 3,503 | 596 | 3,530 | 9,834 | 57,352 |
| | 07/09 | 5 | 6 | 264 | 3,813 | 7,200 | 44,238 | 513 | 3,139 | 5,346 | 12,542 | 1,638 | 10,010 | 14,961 | 73,742 |
| | 07/10 | 4 | 4 | 187 | 1,292 | 2,279 | 12,703 | 187 | 1,156 | 1,765 | 5,111 | 768 | 4,433 | 5,186 | 24,695 |
| | 07/11 | 5 | 5 | 133 | 2,146 | 3,798 | 22,406 | 262 | 1,703 | 2,440 | 6,831 | 458 | 2,843 | 7,091 | 35,929 |
| | 07/12 | 3 | 3 | 85 | 1,519 | 857 | 5,051 | 91 | 600 | 913 | 2,557 | 154 | 956 | 2,100 | 10,683 |
| | Totals | 10 | 51 | 1,202 | 13,986 | 79,239 | 442,665 | 1,220 | 7,585 | 13,296 | 35,632 | 14,615 | 86,020 | 109,572 | 585,888 |
| | Average Weight | | | | 11.64 | | 5.59 | | 6.22 | | 2.68 | | 5.89 | | |
| 27374 | 07/28 ^b | 1 | 1 | 14 | 65 | 83 | 450 | 356 | 2024 | 1826 | 5539 | 57 | 300 | 2,336 | 8,378 |
| | 07/29 | 13 | 13 | 41 | 356 | 707 | 4,612 | 2,560 | 16,021 | 50,699 | 154,188 | 696 | 4,299 | 54,703 | 179,476 |
| | 07/30 | 19 | 19 | 93 | 836 | 1,518 | 9,285 | 3,157 | 18,883 | 41,225 | 141,162 | 774 | 4,157 | 46,767 | 174,323 |
| | 07/31 | 14 | 15 | 34 | 231 | 762 | 4,512 | 2,015 | 11,942 | 37,509 | 125,276 | 686 | 4,024 | 41,006 | 145,985 |
| | 08/10 | 4 | 4 | 1 | 13 | 59 | 347 | 420 | 2,675 | 5,670 | 17,843 | 99 | 584 | 6,249 | 21,462 |
| | 08/11 | 13 | 13 | 20 | 165 | 588 | 3,559 | 2,912 | 18,010 | 42,648 | 143,607 | 1,037 | 5,984 | 47,205 | 171,325 |
| | 08/12 | 7 | 7 | 12 | 111 | 290 | 1,694 | 590 | 3,737 | 17,620 | 55,836 | 329 | 2,043 | 18,841 | 63,421 |
| | 08/16 | 7 | 7 | 4 | 45 | 444 | 2,582 | 414 | 2,659 | 7,997 | 24,081 | 350 | 2,321 | 9,209 | 31,688 |
| | 08/17 | 4 | 4 | 9 | 66 | 275 | 1,853 | 874 | 5,079 | 9,515 | 33,312 | 563 | 2,826 | 11,236 | 43,136 |
| | 08/19 | 4 | 4 | 0 | 0 | 62 | 373 | 318 | 1,883 | 5,303 | 15,923 | 226 | 1,455 | 5,909 | 19,634 |
| | 08/24 | 4 | 4 | 1 | 16 | 270 | 1,800 | 841 | 6,320 | 10,263 | 35,929 | 380 | 1,905 | 11,755 | 45,970 |
| | 08/26 | | | 0 | 0 | 486 | 2,914 | 1,016 | 6,808 | 2,756 | 8,820 | 454 | 2,181 | 4,712 | 20,723 |
| | Totals | 34 | 92 | 229 | 1,904 | 5,544 | 33,981 | 15,473 | 96,041 | 233,031 | 761,516 | 5,651 | 32,079 | 259,928 | 925,521 |
| | Average Weight | | | | 8.31 | | 6.13 | | 6.21 | | 3.27 | | 5.68 | | |

-Continued-

Table 5. (page 8 of 10)

| Stat Area | Date MM/DD | Fishing Effort | | Chinook | | Sockeye | | Coho | | Pink | | Chum | | Total | |
|--------------|----------------|----------------|----------|---------|--------|---------|---------|--------|---------|---------|-----------|--------|--------|---------|-----------|
| | | Permits | Landings | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds |
| 27380 | 07/30 | | | 0 | 0 | 0 | 0 | 0 | 0 | 972 | 3,663 | 2 | 20 | 974 | 3,683 |
| | 08/12 | | | 0 | 0 | 57 | 245 | 103 | 547 | 2,650 | 8,368 | 22 | 101 | 2,832 | 9,261 |
| | 08/16 | | | 0 | 0 | 9 | 40 | 35 | 208 | 291 | 943 | 3 | 44 | 338 | 1,235 |
| | Totals | | | 0 | 0 | 66 | 285 | 138 | 755 | 3,913 | 12,974 | 27 | 165 | 4,144 | 14,179 |
| | Average Weight | | | | | | 4.32 | | 5.47 | | 3.32 | | 6.11 | | |
| 27384 | 07/12 | | | 3 | 50 | 288 | 1,542 | 249 | 1,328 | 443 | 1,221 | 100 | 405 | 1,083 | 4,546 |
| | Totals | | | 3 | 50 | 288 | 1,542 | 249 | 1,328 | 443 | 1,221 | 100 | 405 | 1,083 | 4,546 |
| | Average Weight | | | | | | 16.67 | | 5.35 | | 5.33 | | 2.76 | | |
| 27390 | 07/07 | | | 89 | 626 | 838 | 5,026 | 888 | 4,886 | 579 | 2,026 | 495 | 2,970 | 2,889 | 15,534 |
| | 07/08 | 7 | 7 | 242 | 2,695 | 5,160 | 31,346 | 5,251 | 33,298 | 6,359 | 15,670 | 1,749 | 10,580 | 18,761 | 93,589 |
| | 07/09 | 6 | 7 | 114 | 1,553 | 4,241 | 26,051 | 4,670 | 28,424 | 7,112 | 17,671 | 785 | 4,836 | 16,922 | 78,535 |
| | 07/10 | 12 | 13 | 728 | 7,103 | 8,597 | 51,634 | 9,096 | 57,383 | 12,657 | 31,878 | 3,749 | 22,380 | 34,827 | 170,378 |
| | 07/11 | 12 | 12 | 409 | 3,245 | 4,867 | 20,924 | 4,299 | 24,440 | 6,624 | 16,345 | 2,171 | 13,477 | 18,370 | 78,431 |
| | 07/12 | 6 | 6 | 150 | 1,579 | 934 | 4,735 | 1,903 | 10,635 | 1,802 | 4,500 | 652 | 3,523 | 5,441 | 24,972 |
| | 07/21 | 5 | 5 | 8 | 73 | 811 | 5,225 | 1,626 | 9,920 | 6,596 | 18,376 | 156 | 995 | 9,197 | 34,589 |
| | 07/22 | 4 | 4 | 24 | 202 | 694 | 4,304 | 1,444 | 8,784 | 7,295 | 20,896 | 199 | 1,120 | 9,656 | 35,306 |
| | 07/23 | 12 | 12 | 205 | 1,542 | 3,308 | 22,432 | 3,540 | 21,611 | 16,328 | 46,277 | 639 | 4,157 | 24,020 | 96,019 |
| | 07/24 | 11 | 12 | 121 | 1,101 | 2,474 | 16,066 | 3,666 | 21,133 | 23,734 | 70,919 | 629 | 4,070 | 30,624 | 113,289 |
| | 07/29 | 11 | 11 | 35 | 241 | 858 | 5,372 | 765 | 4,400 | 7,561 | 25,074 | 157 | 994 | 9,376 | 36,081 |
| | 07/30 | 13 | 15 | 24 | 178 | 1,888 | 11,253 | 2,222 | 13,330 | 17,462 | 58,053 | 303 | 1,582 | 21,899 | 84,396 |
| | 07/31 | 24 | 26 | 99 | 722 | 3,015 | 16,988 | 4,567 | 28,540 | 69,181 | 218,356 | 870 | 5,258 | 77,732 | 269,864 |
| | 08/10 | 7 | 7 | 3 | 46 | 249 | 1,243 | 1,135 | 6,271 | 9,982 | 32,988 | 252 | 1,286 | 11,621 | 41,834 |
| | 08/11 | 16 | 16 | 51 | 612 | 1,482 | 7,347 | 3,821 | 23,227 | 59,195 | 191,352 | 1,139 | 6,066 | 65,688 | 228,604 |
| | 08/12 | 18 | 18 | 9 | 108 | 1,102 | 6,087 | 1,928 | 11,623 | 48,846 | 159,327 | 799 | 4,299 | 52,684 | 181,444 |
| | 08/13 | 10 | 10 | 5 | 58 | 440 | 2,753 | 665 | 4,111 | 21,186 | 68,436 | 435 | 2,731 | 22,731 | 78,089 |
| | 08/16 | 15 | 19 | 9 | 96 | 747 | 4,165 | 1,381 | 8,436 | 24,594 | 80,402 | 612 | 3,410 | 27,343 | 96,509 |
| | 08/17 | 10 | 11 | 4 | 48 | 700 | 4,082 | 1,376 | 8,636 | 16,635 | 55,502 | 397 | 2,358 | 19,112 | 70,626 |
| | 08/24 | 3 | 3 | 0 | 0 | 29 | 164 | 149 | 1,032 | 1,423 | 4,917 | 29 | 149 | 1,630 | 6,262 |
| | 08/25 | | | 0 | 0 | 12 | 71 | 174 | 1,126 | 250 | 1,000 | 33 | 152 | 469 | 2,349 |
| | 08/26 | | | 12 | 171 | 64 | 347 | 416 | 2,823 | 864 | 2,971 | 52 | 235 | 1,408 | 6,547 |
| | Totals | 63 | 219 | 2,341 | 21,999 | 42,510 | 247,615 | 54,982 | 334,069 | 366,265 | 1,142,936 | 16,302 | 96,628 | 482,400 | 1,843,247 |
| | Average Weight | | | | 9.40 | | 5.82 | | 6.08 | | 3.12 | | 5.93 | | |

-Continued-

Table 5. (page 9 of 10)

| Stat Area | Date MM/DD | Fishing Effort | | Chinook | | Sockeye | | Coho | | Pink | | Chum | | Total | |
|-----------|----------------|----------------|----------|---------|--------|---------|---------|--------|---------|--------|---------|--------|--------|---------|---------|
| | | Permits | Landings | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds |
| 27394 | 07/13 | | | 19 | 118 | 82 | 440 | 146 | 861 | 72 | 270 | 100 | 538 | 419 | 2,227 |
| | 07/21 | | | 0 | 0 | 418 | 2,932 | 195 | 1,174 | 812 | 2,031 | 78 | 551 | 1,503 | 6,688 |
| | 07/22 | 6 | 7 | 145 | 1,328 | 1,827 | 10,886 | 1,487 | 9,009 | 2,938 | 8,486 | 284 | 1,684 | 6,681 | 31,393 |
| | 07/23 | | | 32 | 222 | 60 | 380 | 274 | 1,727 | 390 | 1,170 | 37 | 235 | 793 | 3,734 |
| | 07/24 | | | 21 | 141 | 322 | 2,063 | 1,356 | 8,054 | 4,144 | 12,442 | 106 | 776 | 5,949 | 23,476 |
| | 07/30 | 3 | 3 | 1 | 8 | 185 | 1,099 | 214 | 1,221 | 2,627 | 7,990 | 78 | 487 | 3,105 | 10,805 |
| | 07/31 | 6 | 6 | 200 | 1,566 | 632 | 3,169 | 1,561 | 9,225 | 13,435 | 41,556 | 429 | 2,227 | 16,257 | 57,743 |
| | 08/11 | 8 | 8 | 38 | 336 | 373 | 1,864 | 1,565 | 9,696 | 12,647 | 40,471 | 364 | 2,042 | 14,987 | 54,409 |
| | 08/12 | 7 | 7 | 10 | 245 | 319 | 1,505 | 1,029 | 6,492 | 10,227 | 33,957 | 217 | 1,130 | 11,802 | 43,329 |
| | 08/13 | 10 | 10 | 17 | 166 | 264 | 1,460 | 796 | 5,225 | 10,461 | 34,561 | 248 | 1,344 | 11,786 | 42,756 |
| | 08/16 | 4 | 4 | 0 | 0 | 103 | 549 | 286 | 1,759 | 2,499 | 7,993 | 146 | 798 | 3,034 | 11,099 |
| | 08/17 | | | 3 | 30 | 76 | 410 | 214 | 1,342 | 2,396 | 8,022 | 33 | 172 | 2,722 | 9,976 |
| | 08/19 | 5 | 5 | 14 | 183 | 308 | 1,542 | 724 | 4,823 | 4,624 | 14,798 | 224 | 1,062 | 5,894 | 22,408 |
| | 08/24 | 8 | 9 | 3 | 48 | 224 | 1,175 | 816 | 5,789 | 6,788 | 23,685 | 214 | 1,052 | 8,045 | 31,749 |
| | 08/25 | 7 | 7 | 1 | 20 | 187 | 1,070 | 1,226 | 8,666 | 5,860 | 20,306 | 218 | 1,099 | 7,492 | 31,161 |
| | 08/26 | 4 | 4 | 14 | 163 | 83 | 422 | 553 | 3,862 | 1,506 | 5,062 | 20 | 123 | 2,176 | 9,632 |
| | 08/30 | 6 | 6 | 14 | 197 | 156 | 867 | 529 | 3,712 | 387 | 1,231 | 138 | 864 | 1,224 | 6,871 |
| | 08/31 | | | 8 | 100 | 24 | 120 | 243 | 2,046 | 140 | 450 | 31 | 160 | 446 | 2,876 |
| | Totals | 42 | 84 | 540 | 4,871 | 5,643 | 31,953 | 13,214 | 84,683 | 81,953 | 264,481 | 2,965 | 16,344 | 104,315 | 402,332 |
| | Average Weight | | | | 8.96 | | 5.71 | | 6.41 | | 3.23 | | 5.51 | | |
| 27540 | 07/07 | 8 | 8 | 17 | 244 | 3,697 | 23,430 | 263 | 1,527 | 558 | 1,542 | 164 | 893 | 4,699 | 27,636 |
| | 07/08 | 15 | 16 | 127 | 1,492 | 18,496 | 113,582 | 2,684 | 15,606 | 2,412 | 7,647 | 1,156 | 6,212 | 24,875 | 144,539 |
| | 07/09 | 16 | 16 | 337 | 3,474 | 21,973 | 130,757 | 3,594 | 20,366 | 3,505 | 10,160 | 1,259 | 8,677 | 30,668 | 173,434 |
| | 07/10 | 14 | 14 | 157 | 1,962 | 9,722 | 60,497 | 2,124 | 12,866 | 1,674 | 4,822 | 523 | 3,602 | 14,200 | 83,749 |
| | 07/11 | 14 | 15 | 154 | 1,838 | 13,279 | 84,493 | 2,626 | 17,441 | 2,933 | 8,258 | 866 | 5,535 | 19,858 | 117,565 |
| | 07/12 | 11 | 11 | 32 | 318 | 10,535 | 67,292 | 498 | 2,850 | 1,566 | 4,791 | 381 | 2,208 | 13,012 | 77,459 |
| | 07/13 | 8 | 8 | 26 | 287 | 9,337 | 58,330 | 1,699 | 10,800 | 3,824 | 9,288 | 968 | 6,027 | 15,854 | 84,732 |
| | 07/21 | | | 0 | 0 | 356 | 2,135 | 253 | 1,517 | 1,341 | 4,426 | 48 | 247 | 1,998 | 8,325 |
| | 07/22 | 6 | 6 | 31 | 391 | 4,135 | 26,756 | 3,434 | 23,684 | 15,948 | 48,707 | 633 | 4,179 | 24,181 | 103,717 |
| | 07/23 | 15 | 20 | 53 | 446 | 13,796 | 85,562 | 13,384 | 85,213 | 54,763 | 173,395 | 3,908 | 22,882 | 85,904 | 367,498 |
| | 07/24 | 11 | 11 | 7 | 47 | 2,426 | 15,601 | 824 | 4,859 | 6,489 | 21,100 | 546 | 3,454 | 10,292 | 45,061 |
| | 07/29 | 15 | 15 | 29 | 314 | 2,509 | 15,802 | 4,360 | 27,487 | 50,428 | 164,198 | 951 | 6,291 | 58,277 | 214,092 |
| | 07/30 | 13 | 14 | 86 | 835 | 2,469 | 15,806 | 3,294 | 19,629 | 55,921 | 178,153 | 1,188 | 6,909 | 62,958 | 221,332 |
| | 07/31 | 12 | 13 | 127 | 1,482 | 2,537 | 16,190 | 3,944 | 25,957 | 57,441 | 183,769 | 1,092 | 7,573 | 65,141 | 234,971 |
| | 08/10 | | | 2 | 27 | 260 | 1,563 | 194 | 1,237 | 14,997 | 49,490 | 142 | 808 | 15,595 | 53,125 |
| | 08/11 | 11 | 13 | 99 | 1,420 | 1,790 | 10,917 | 1,463 | 8,671 | 77,680 | 283,655 | 1,459 | 8,364 | 82,491 | 313,027 |
| | 08/12 | 10 | 10 | 1 | 10 | 1,401 | 9,025 | 1,134 | 7,000 | 63,416 | 233,212 | 956 | 6,078 | 66,908 | 255,325 |
| | 08/13 | 6 | 6 | 1,299 | 7,898 | 215 | 1,128 | 28,873 | 116,352 | 610 | 3,535 | | | 30,997 | 128,913 |
| | 08/16 | 8 | 8 | 4 | 51 | 947 | 5,981 | 1,260 | 8,151 | 25,701 | 90,664 | 930 | 5,386 | 28,842 | 110,233 |
| | 08/17 | 8 | 9 | 13 | 177 | 1,063 | 6,978 | 1,109 | 6,890 | 29,734 | 102,454 | 1,709 | 9,953 | 33,628 | 126,452 |
| | 08/18 | | | 1 | 18 | 890 | 6,236 | 734 | 4,410 | 14,616 | 52,621 | 637 | 3,828 | 16,878 | 67,113 |

-Continued-

Table 5. (page 10 of 10)

| Stat Area | Date MM/DD | Fishing Effort | | Chinook | | Sockeye | | Coho | | Pink | | Chum | | Total | |
|----------------|------------|----------------|----------|---------|--------|---------|---------|--------|---------|---------|-----------|--------|---------|---------|-----------|
| | | Permits | Landings | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds | Number | Pounds |
| 27540 | 08/19 | 6 | 6 | 4 | 45 | 319 | 1,856 | 699 | 4,309 | 12,052 | 37,867 | 526 | 3,299 | 13,600 | 47,376 |
| | 08/24 | 6 | 6 | 1 | 12 | 1,193 | 7,494 | 737 | 4,422 | 10,080 | 32,345 | 489 | 3,180 | 12,500 | 47,453 |
| | 08/25 | | | 2 | 21 | 708 | 4,223 | 607 | 3,638 | 5,196 | 15,314 | 355 | 2,435 | 6,868 | 25,631 |
| | 08/26 | | | 875 | 5,177 | 727 | 4,378 | 5,862 | 18,852 | 486 | 2,675 | | | 7,950 | 31,082 |
| | 08/30 | | | 34 | 197 | 10 | 66 | 147 | 525 | 45 | 246 | | | 236 | 1,034 |
| | Totals | 40 | 236 | 1,310 | 14,911 | 126,046 | 783,778 | 51,870 | 324,102 | 547,157 | 1,853,607 | 22,027 | 134,476 | 748,410 | 3,110,874 |
| Average Weight | | | | | 11.38 | | 6.22 | | 6.25 | | 3.39 | | 6.11 | | |
| 27550 | 07/08 | | | 36 | 424 | 1,359 | 8,998 | 58 | 235 | 111 | 385 | 47 | 234 | 1,611 | 10,276 |
| | 07/09 | 3 | 3 | 37 | 408 | 1,511 | 9,082 | 48 | 248 | 135 | 418 | 52 | 342 | 1,783 | 10,498 |
| | 07/10 | | | 94 | 742 | 898 | 5,398 | 4 | 24 | 222 | 682 | 34 | 218 | 1,252 | 7,064 |
| | 07/11 | | | 5 | 65 | 222 | 1,439 | 82 | 430 | 72 | 221 | 113 | 623 | 494 | 2,778 |
| | 07/12 | | | 27 | 344 | 508 | 3,459 | 10 | 60 | 109 | 375 | 13 | 77 | 667 | 4,315 |
| | 07/22 | | | 1 | 22 | 325 | 2,097 | 378 | 3,217 | 1,605 | 4,814 | 84 | 808 | 2,393 | 10,958 |
| | 07/23 | 5 | 6 | 25 | 354 | 1,930 | 12,257 | 1,133 | 9,633 | 9,962 | 30,050 | 291 | 3,226 | 13,341 | 55,520 |
| | 07/24 | | | 0 | 0 | 74 | 450 | 72 | 404 | 793 | 3,067 | 68 | 362 | 1,007 | 4,283 |
| | 07/29 | 6 | 6 | 43 | 803 | 732 | 4,747 | 629 | 4,731 | 13,019 | 41,690 | 292 | 2,428 | 14,715 | 54,399 |
| | 07/30 | | | 26 | 292 | 392 | 2,594 | 64 | 411 | 4,868 | 16,255 | 123 | 696 | 5,473 | 20,248 |
| | 07/31 | 6 | 6 | 38 | 551 | 971 | 6,816 | 666 | 4,162 | 21,265 | 76,500 | 144 | 834 | 23,084 | 88,863 |
| | 08/10 | 3 | 3 | 3 | 38 | 116 | 613 | 95 | 559 | 4,981 | 15,510 | 155 | 896 | 5,350 | 17,616 |
| | 08/11 | 4 | 4 | 30 | 358 | 398 | 2,471 | 98 | 697 | 11,929 | 37,604 | 277 | 2,497 | 12,732 | 43,627 |
| | 08/12 | 5 | 5 | 44 | 332 | 693 | 4,266 | 169 | 1,230 | 13,706 | 42,052 | 269 | 1,838 | 14,881 | 49,718 |
| | 08/13 | | | 0 | 0 | 136 | 830 | 15 | 70 | 4,686 | 14,525 | 83 | 502 | 4,920 | 15,927 |
| | 08/16 | 5 | 5 | 3 | 40 | 332 | 2,057 | 208 | 1,282 | 6,808 | 21,301 | 221 | 1,329 | 7,572 | 26,009 |
| | 08/17 | 3 | 3 | 1 | 18 | 190 | 1,144 | 156 | 955 | 5,110 | 16,249 | 206 | 1,266 | 5,663 | 19,632 |
| | 08/18 | 3 | 3 | 4 | 87 | 38 | 256 | 27 | 179 | 959 | 3,305 | 28 | 131 | 1,056 | 3,958 |
| | 08/24 | | | 2 | 38 | 297 | 1,825 | 145 | 871 | 1,522 | 4,614 | 197 | 1,345 | 2,163 | 8,693 |
| | 08/25 | | | 0 | 0 | 18 | 110 | 7 | 55 | 52 | 205 | 12 | 60 | 89 | 430 |
| Totals | | 17 | 59 | 419 | 4,916 | 11,140 | 70,909 | 4,064 | 29,453 | 101,914 | 329,822 | 2,709 | 19,712 | 120,246 | 454,812 |
| Average Weight | | | | | 11.73 | | 6.37 | | 7.25 | | 3.24 | | 7.28 | | |

^a Effort data was omitted due to confidentiality concerns (<3 vessels).

^b Catch from this delivery are from a test fishery.

Table 6. Chignik Management Area average weight comparisons of salmon caught inside and outside the Chignik Bay District, 1983-1993^a.

| Year | Chinook | | Average Weight | Sockeye | | Average Weight | Coho | | Average Weight | Pink | | Average Weight | Chum | | Average Weight |
|---|---------|---------|----------------|-----------|------------|----------------|---------|-----------|----------------|-----------|------------|----------------|---------|-----------|----------------|
| | Number | Pounds | | Number | Pounds | | Number | Pounds | | Number | Pounds | | Number | Pounds | |
| Salmon Caught within Chignik Bay District | | | | | | | | | | | | | | | |
| 1983 | 3,560 | 80,193 | 22.5 | 1,597,059 | 10,536,850 | 6.6 | 29,519 | 250,786 | 8.5 | 27,284 | 97,222 | 3.6 | 16,747 | 130,154 | 7.8 |
| 1984 | 3,696 | 93,096 | 25.2 | 1,942,822 | 13,579,107 | 7.0 | 72,722 | 658,240 | 9.1 | 165,178 | 670,923 | 4.1 | 8,173 | 61,159 | 7.5 |
| 1985 | 1,810 | 43,396 | 24.0 | 812,605 | 4,820,590 | 5.9 | 156,579 | 1,431,798 | 9.1 | 14,429 | 55,900 | 3.9 | 4,906 | 31,307 | 6.4 |
| 1986 | 2,592 | 60,723 | 23.4 | 1,389,172 | 9,488,499 | 6.8 | 60,197 | 481,706 | 8.0 | 191,264 | 767,714 | 4.0 | 18,167 | 134,735 | 7.4 |
| 1987 | 1,931 | 42,848 | 22.2 | 1,559,757 | 11,508,187 | 7.4 | 77,333 | 654,640 | 8.5 | 13,887 | 51,855 | 3.7 | 5,163 | 38,429 | 7.4 |
| 1988 | 4,331 | 96,241 | 22.2 | 529,540 | 3,873,621 | 7.3 | 94,292 | 819,677 | 8.7 | 119,794 | 460,519 | 3.8 | 7,013 | 55,911 | 8.0 |
| 1989 | 3,532 | 76,491 | 21.7 | 1,156,782 | 7,950,548 | 6.9 | 68,231 | 559,127 | 8.2 | 27,691 | 94,218 | 3.4 | 1,587 | 11,546 | 7.3 |
| 1990 | 3,719 | 80,915 | 21.8 | 1,400,069 | 9,374,800 | 6.7 | 61,260 | 497,901 | 8.1 | 94,528 | 319,928 | 3.4 | 11,460 | 77,739 | 6.8 |
| 1991 | 1,996 | 47,206 | 23.7 | 1,487,421 | 10,196,187 | 6.9 | 56,574 | 481,741 | 8.5 | 76,163 | 231,960 | 3.0 | 17,545 | 115,553 | 6.6 |
| 1992 | 3,181 | 67,840 | 21.3 | 792,889 | 5,177,003 | 6.5 | 80,946 | 676,752 | 8.4 | 178,105 | 729,324 | 4.1 | 12,711 | 79,207 | 6.2 |
| 1993 | 5,240 | 85,848 | 16.4 | 762,730 | 4,675,799 | 6.1 | 48,808 | 349,816 | 7.2 | 55,909 | 174,334 | 3.1 | 8,116 | 44,235 | 5.5 |
| 10-Year Average Weight | | | 22.7 | | | | 6.8 | | | | 8.6 | | | | 7.1 |
| Salmon Caught in all other Districts | | | | | | | | | | | | | | | |
| 1983 | 1,928 | 15,966 | 8.3 | 227,116 | 1,389,979 | 6.1 | 32,408 | 237,417 | 7.3 | 293,894 | 1,103,666 | 3.8 | 142,665 | 1,075,112 | 7.5 |
| 1984 | 622 | 6,471 | 10.4 | 717,797 | 4,957,180 | 6.9 | 37,406 | 291,725 | 7.8 | 279,626 | 980,326 | 3.5 | 55,130 | 424,808 | 7.7 |
| 1985 | 78 | 1,508 | 19.3 | 109,546 | 629,469 | 5.7 | 34,609 | 278,049 | 8.0 | 145,699 | 587,831 | 4.0 | 17,900 | 113,974 | 6.4 |
| 1986 | 445 | 6,049 | 13.6 | 256,662 | 1,766,361 | 6.9 | 56,436 | 385,489 | 6.8 | 455,861 | 1,606,597 | 3.5 | 158,473 | 1,169,683 | 7.4 |
| 1987 | 720 | 6,634 | 9.2 | 339,081 | 2,493,527 | 7.4 | 73,081 | 535,163 | 7.3 | 232,888 | 847,705 | 3.6 | 122,098 | 905,512 | 7.4 |
| 1988 | 2,965 | 32,639 | 11.0 | 266,301 | 1,840,831 | 6.9 | 276,128 | 2,069,750 | 7.5 | 2,877,365 | 10,262,986 | 3.6 | 260,762 | 2,140,466 | 8.2 |
| 1989 | 10 | 207 | 20.7 | 2,505 | 18,732 | 7.5 | 2 | 13 | 6.5 | 21 | 51 | 2.4 | 37 | 342 | 9.2 |
| 1990 | 6,182 | 53,350 | 8.6 | 693,581 | 4,434,969 | 6.4 | 68,871 | 435,844 | 6.3 | 455,480 | 1,355,716 | 3.0 | 258,544 | 1,679,280 | 6.5 |
| 1991 | 1,161 | 19,497 | 16.8 | 408,244 | 2,748,265 | 6.7 | 109,051 | 701,216 | 6.4 | 1,093,085 | 3,125,671 | 2.9 | 243,551 | 1,560,646 | 6.4 |
| 1992 | 7,651 | 70,250 | 9.2 | 484,560 | 3,195,899 | 6.6 | 229,997 | 1,685,939 | 7.3 | 1,375,968 | 5,069,835 | 3.7 | 209,423 | 1,513,119 | 7.2 |
| 1993 | 14,275 | 148,405 | 10.4 | 934,621 | 5,586,833 | 6.0 | 180,651 | 1,111,428 | 6.2 | 1,592,468 | 5,139,463 | 3.2 | 114,244 | 691,812 | 6.1 |
| 10-Year Average Weight | | | 10.0 | | | | 6.5 | | | | 7.0 | | | | 7.1 |

^a Ten-year average was calculated using 1983-93 data excluding 1989 (oil spill year) where openings and closures were restricted.

Table 7. Chignik Management Area processors, 1993.

| | |
|--|--|
| F0021 Int'l Seafoods of Alaska P.O. Box 2997 Kodiak, Ak. 99615 | F0940 Trident Seafoods Corp. P.O. Box 229 Sand Point, Ak. 99661 |
| F0365 Chignik Pride Fisheries 4241 21st Ave. W., Suite 300 Seattle, Wa. 98199 | F1039 Inlet Fisheries, Inc. P.O. Box 530 Kenai Ak. 99611 |
| F0622 Aleutian Dragon Fisheries P.O. Box 70668 Seattle, Wa. 98107 | |

Table 8. Chignik Management Area commercial salmon catches by year, 1960-1993^{ab}.

| Year | Number of Fish | | | | | Total |
|---------------|----------------|-----------|---------|-----------|---------|-----------|
| | Chinook | Sockeye | Coho | Pink | Chum | |
| 1960 | 643 | 715,969 | 8,933 | 557,327 | 486,699 | 1,769,571 |
| 1961 | 409 | 322,890 | 3,088 | 443,510 | 178,760 | 948,657 |
| 1962 | 435 | 364,753 | 1,292 | 1,519,305 | 364,335 | 2,250,120 |
| 1963 | 1,744 | 408,606 | 9,933 | 1,662,363 | 112,697 | 2,195,343 |
| 1964 | 1,099 | 556,890 | 2,735 | 1,682,365 | 333,336 | 2,576,425 |
| 1965 | 1,592 | 599,553 | 9,602 | 1,118,158 | 120,589 | 1,849,494 |
| 1966 | 636 | 219,794 | 16,050 | 683,215 | 238,883 | 1,158,578 |
| 1967 | 882 | 462,000 | 13,150 | 108,981 | 75,543 | 660,556 |
| 1968 | 674 | 977,382 | 2,200 | 1,290,660 | 223,861 | 2,494,777 |
| 1969 | 3,448 | 394,135 | 18,103 | 1,779,736 | 67,721 | 2,263,143 |
| 1970 | 1,226 | 1,325,734 | 15,348 | 1,157,172 | 437,252 | 2,936,732 |
| 1971 | 2,010 | 1,016,136 | 14,557 | 612,290 | 353,952 | 1,998,945 |
| 1972 | 464 | 378,218 | 19,615 | 72,161 | 78,298 | 548,756 |
| 1973 | 525 | 870,354 | 22,322 | 25,472 | 8,717 | 927,390 |
| 1974 | 255 | 662,905 | 12,245 | 69,515 | 34,312 | 779,232 |
| 1975 | 549 | 399,593 | 53,283 | 66,165 | 25,161 | 544,751 |
| 1976 | 2,290 | 1,163,728 | 35,167 | 395,287 | 81,403 | 1,677,875 |
| 1977 | 710 | 1,972,207 | 17,430 | 604,806 | 110,452 | 2,705,605 |
| 1978 | 1,603 | 1,576,283 | 20,212 | 985,114 | 120,889 | 2,704,101 |
| 1979 | 1,253 | 1,049,497 | 99,129 | 1,905,198 | 188,907 | 3,243,984 |
| 1980 | 2,344 | 859,966 | 119,573 | 1,093,184 | 252,521 | 2,327,588 |
| 1981 | 2,694 | 1,839,469 | 78,805 | 1,162,613 | 580,332 | 3,663,913 |
| 1982 | 5,236 | 1,521,686 | 300,273 | 873,384 | 390,096 | 3,090,675 |
| 1983 | 5,488 | 1,824,175 | 61,927 | 321,178 | 159,412 | 2,372,180 |
| 1984 | 4,318 | 2,660,619 | 110,128 | 444,804 | 63,303 | 3,283,172 |
| 1985 | 1,888 | 922,151 | 191,188 | 160,128 | 22,806 | 1,298,161 |
| 1986 | 3,037 | 1,645,834 | 116,633 | 647,125 | 176,640 | 2,589,269 |
| 1987 | 2,651 | 1,898,838 | 150,414 | 246,775 | 127,261 | 2,425,939 |
| 1988 | 7,296 | 795,841 | 370,420 | 2,997,159 | 267,775 | 4,437,832 |
| 1989 | 3,542 | 1,159,287 | 68,233 | 27,712 | 1,624 | 1,260,398 |
| 1990 | 9,901 | 2,093,650 | 130,131 | 550,008 | 270,004 | 3,053,694 |
| 1991 | 3,157 | 1,895,665 | 165,625 | 1,169,248 | 261,096 | 3,494,791 |
| 1992 | 10,832 | 1,277,449 | 310,943 | 1,554,073 | 222,134 | 3,375,431 |
| 1993 | 19,515 | 1,697,351 | 229,459 | 1,648,397 | 122,360 | 3,717,062 |
| <hr/> | | | | | | |
| Avg (1964-93) | 3,371 | 1,190,546 | 92,497 | 848,403 | 180,555 | 2,315,371 |
| Avg (1974-93) | 4,428 | 1,445,810 | 132,061 | 846,004 | 173,924 | 2,602,317 |
| Avg (1984-93) | 6,614 | 1,604,669 | 184,317 | 944,543 | 153,500 | 2,893,643 |

^a Catch does not include Cape Igvak or Southeastern District Mainland Area.

^b Catches (1970-1993) were updated using historical electronic fish ticket databases.

Table 9. Chignik Management Area economic value of salmon and average income per commercial salmon permit holder, in dollars, 1970-1993.

| Year | Chinook | | Sockeye | | Coho | | Pink | | Chum | | Total Value |
|------|---------|---------|------------|---------|-----------|---------|-----------|---------|-----------|---------|-------------|
| | Total | Average | Total | Average | Total | Average | Total | Average | Total | Average | |
| 1970 | 6,129 | 89 | 2,190,272 | 31,743 | 18,397 | 267 | 635,673 | 9,213 | 376,025 | 5,450 | 3,226,496 |
| 1971 | 6,472 | 84 | 2,034,279 | 26,419 | 23,240 | 302 | 366,693 | 4,762 | 326,760 | 4,244 | 2,757,444 |
| 1972 | 2,028 | 28 | 825,498 | 11,308 | 35,699 | 489 | 48,401 | 663 | 87,759 | 1,202 | 999,385 |
| 1973 | 5,255 | 72 | 3,030,057 | 41,508 | 73,663 | 1,009 | 20,610 | 282 | 10,180 | 139 | 3,139,765 |
| 1974 | 2,941 | 32 | 3,618,781 | 39,767 | 31,933 | 351 | 64,069 | 704 | 51,125 | 562 | 3,768,849 |
| 1975 | 6,561 | 76 | 1,384,271 | 16,240 | 213,539 | 2,581 | 104,115 | 12,211 | 61,704 | 717 | 1,770,190 |
| 1976 | 13,800 | 179 | 4,751,000 | 61,701 | 138,000 | 1,792 | 568,300 | 7,381 | 183,600 | 2,384 | 5,654,700 |
| 1977 | 18,828 | 212 | 14,553,720 | 163,525 | 104,819 | 1,178 | 920,881 | 10,347 | 368,066 | 4,136 | 15,966,314 |
| 1978 | 56,700 | 597 | 15,653,500 | 164,774 | 116,400 | 1,225 | 1,131,500 | 11,911 | 404,500 | 4,258 | 17,362,600 |
| 1979 | 32,050 | 317 | 11,345,503 | 112,332 | 710,192 | 7,031 | 2,622,269 | 25,963 | 126,866 | 1,256 | 14,836,880 |
| 1980 | 67,657 | 670 | 5,532,290 | 54,775 | 520,655 | 5,155 | 1,477,060 | 14,624 | 1,061,963 | 10,514 | 8,659,625 |
| 1981 | 75,231 | 730 | 17,262,119 | 167,593 | 439,900 | 4,271 | 1,881,334 | 18,265 | 2,431,421 | 23,606 | 22,090,005 |
| 1982 | 75,276 | 717 | 13,038,510 | 124,176 | 1,782,027 | 16,972 | 578,184 | 5,506 | 1,356,597 | 12,920 | 16,830,594 |
| 1983 | 96,159 | 962 | 10,728,088 | 107,281 | 219,650 | 2,197 | 240,171 | 2,402 | 421,713 | 4,217 | 11,705,781 |
| 1984 | 114,502 | 1,134 | 20,402,076 | 202,000 | 759,972 | 7,525 | 330,916 | 3,276 | 146,024 | 1,446 | 21,753,490 |
| 1985 | 67,088 | 664 | 7,997,834 | 79,186 | 1,471,418 | 14,568 | 140,076 | 1,387 | 59,475 | 589 | 8,735,891 |
| 1986 | 84,800 | 848 | 16,882,290 | 168,823 | 667,740 | 6,677 | 356,147 | 3,562 | 456,546 | 4,565 | 18,447,523 |
| 1987 | 72,739 | 706 | 24,783,033 | 240,612 | 1,035,129 | 10,050 | 269,868 | 2,620 | 339,819 | 3,299 | 26,500,588 |
| 1988 | 286,740 | 2,811 | 14,350,354 | 140,690 | 4,153,424 | 40,720 | 6,771,266 | 66,385 | 2,189,293 | 21,464 | 27,751,077 |
| 1989 | 78,999 | 790 | 13,047,378 | 130,474 | 436,892 | 4,369 | 32,994 | 3,299 | 4,745 | 47 | 13,601,008 |
| 1990 | 185,256 | 1,834 | 22,509,923 | 222,871 | 700,309 | 6,934 | 502,693 | 4,977 | 878,510 | 8,698 | 24,776,691 |
| 1991 | 50,027 | 486 | 11,002,784 | 106,823 | 650,626 | 6,317 | 402,916 | 3,912 | 502,860 | 4,882 | 12,609,213 |
| 1992 | 193,326 | 1,858 | 12,552,025 | 120,693 | 1,323,107 | 12,722 | 811,882 | 7,807 | 414,005 | 3,981 | 15,294,345 |
| 1993 | 175,690 | 1,722 | 8,210,106 | 80,491 | 730,622 | 7,163 | 637,666 | 6,252 | 184,012 | 1,804 | 9,938,096 |

Table 10. Chignik Management Area salmon escapement by district and statistical area, 1993.

| District | Stat Area | Chinook | Sockeye | Coho ^a | Pink ^b | Chum ^b | Total |
|--------------------|-----------|---------|---------|-------------------|-------------------|-------------------|-----------|
| Chignik Bay | 271-10 | 1,946 | 697,377 | 36,000 | 2,000 | 300 | 737,623 |
| | Total | 1,946 | 697,377 | 36,000 | 2,000 | 300 | 737,623 |
| Central | 272-20 | | | | 4,500 | 20,700 | 25,200 |
| | 272-30 | | | | 26,200 | 9,300 | 35,500 |
| | 272-50 | | | | 130,200 | 9,400 | 139,600 |
| | Total | | | | 160,900 | 39,400 | 200,300 |
| Eastern | 272-60 | | 3,000 | | 53,000 | 7,800 | 66,800 |
| | 272-70 | | 1,500 | | 50,700 | 14,100 | 66,300 |
| | 272-72 | | | | 10,000 | 25,000 | 35,000 |
| | 272-80 | | | | 42,500 | 58,000 | 100,500 |
| | 272-90 | | | | 215,000 | 30,000 | 245,000 |
| | 272-92 | | | | 0 | 300 | 300 |
| | 272-96 | | | | 153,500 | 0 | 153,500 |
| | Total | | 4,500 | | 524,700 | 135,200 | 664,400 |
| Western | 273-70 | | | | 16,100 | 0 | 16,100 |
| | 273-72 | | | | 17,300 | 1,700 | 19,000 |
| | 273-72 | | | | 3,200 | 0 | 3,200 |
| | 273-80 | | | | 6,100 | 0 | 6,100 |
| | 273-82 | | | | 2,100 | 400 | 2,500 |
| | 273-84 | | | | 1,000 | 11,900 | 12,900 |
| | Total | | | | 45,800 | 14,000 | 59,800 |
| Perryville | 275-40 | | | | 240,800 | 31,000 | 271,800 |
| | 275-50 | | | | 207,600 | 35,800 | 243,400 |
| | Total | | | | 448,400 | 66,800 | 515,200 |
| All District Total | | 1,946 | 701,877 | 36,000 | 1,181,800 | 255,700 | 2,177,323 |

^a Coho salmon escapement estimates for Chignik Lagoon were from methods from Reggarone (1989). Coho salmon were not aerial surveyed due to budget constraints.

^b Escapement estimates for pink and chum salmon were based on methods of Johnson and Barrett (1988).

Table 11. Chignik River chinook salmon runs, 1960 - 1993.

| Year | Escapement ^a | Catch | Total Run |
|---------------|-------------------------|--------|-----------|
| 1960 | - | 643 | 643 |
| 1961 | - | 409 | 409 |
| 1962 | - | 435 | 435 |
| 1963 | 564 | 1,744 | 2,308 |
| 1964 | 914 | 1,099 | 2,013 |
| 1965 | 942 | 1,592 | 2,534 |
| 1966 | 822 | 636 | 1,458 |
| 1967 | 1,500 | 882 | 2,382 |
| 1968 | 1,000 | 674 | 1,674 |
| 1969 | 600 | 3,448 | 4,048 |
| 1970 | 2,500 | 1,226 | 3,726 |
| 1971 | 2,000 | 2,010 | 4,010 |
| 1972 | 1,500 | 464 | 1,964 |
| 1973 | 822 | 525 | 1,347 |
| 1974 | 672 | 255 | 927 |
| 1975 | 877 | 549 | 1,426 |
| 1976 | 700 | 2,290 | 2,990 |
| 1977 | 798 | 710 | 1,508 |
| 1978 | 1,197 | 1,603 | 2,800 |
| 1979 | 1,050 | 1,253 | 2,303 |
| 1980 | 876 | 2,344 | 3,220 |
| 1981 | 1,603 | 2,694 | 4,297 |
| 1982 | 2,412 | 5,236 | 7,648 |
| 1983 | 1,943 | 5,488 | 7,431 |
| 1984 | 5,806 | 4,318 | 10,124 |
| 1985 | 3,144 | 1,888 | 5,032 |
| 1986 | 3,612 | 3,037 | 6,649 |
| 1987 | 2,624 | 2,651 | 5,275 |
| 1988 | 4,868 | 7,296 | 12,164 |
| 1989 | 3,316 | 3,542 | 6,858 |
| 1990 | 4,364 | 9,901 | 14,265 |
| 1991 | 4,545 | 3,157 | 7,702 |
| 1992 | 3,806 | 10,832 | 14,638 |
| 1993 | 1,946 | 19,515 | 21,461 |
| <hr/> | | | |
| Avg (1964-93) | 2,092 | 3,371 | 5,462 |
| Avg (1974-93) | 2,508 | 4,428 | 6,936 |
| Avg (1984-93) | 3,803 | 6,614 | 10,417 |

^a Estimates are conservative because there is no adjustment for those small chinook that may be confused with sockeye escapement, those that are removed by the sport fishery, those that spawn below the counting weir, or those that escape after weir removal.

Table 12. Chignik weir chinook salmon daily escapement counts, 1993.

| Date | Escapement ^{a, b} | | Date | Escapement ^{a, b} | |
|--------|----------------------------|------------|--------|----------------------------|------------|
| | Daily | Cumulative | | Daily | Cumulative |
| 28-May | 0 | 0 | 07-Jul | 90 | 724 |
| 29-May | 0 | 0 | 08-Jul | 105 | 829 |
| 30-May | 0 | 0 | 09-Jul | 67 | 896 |
| 31-May | 0 | 0 | 10-Jul | 67 | 963 |
| 01-Jun | 0 | 0 | 11-Jul | 151 | 1,114 |
| 02-Jun | 0 | 0 | 12-Jul | 96 | 1,210 |
| 03-Jun | 0 | 0 | 13-Jul | 8 | 1,218 |
| 04-Jun | 0 | 0 | 14-Jul | 6 | 1,224 |
| 05-Jun | 0 | 0 | 15-Jul | 34 | 1,258 |
| 06-Jun | 0 | 0 | 16-Jul | 87 | 1,345 |
| 07-Jun | 0 | 0 | 17-Jul | 29 | 1,374 |
| 08-Jun | 0 | 0 | 18-Jul | 65 | 1,439 |
| 09-Jun | 2 | 2 | 19-Jul | 98 | 1,537 |
| 10-Jun | 0 | 2 | 20-Jul | 109 | 1,646 |
| 11-Jun | 2 | 4 | 21-Jul | 24 | 1,670 |
| 12-Jun | 0 | 4 | 22-Jul | 24 | 1,694 |
| 13-Jun | 0 | 4 | 23-Jul | 52 | 1,746 |
| 14-Jun | 0 | 4 | 24-Jul | 17 | 1,763 |
| 15-Jun | 0 | 4 | 25-Jul | 14 | 1,777 |
| 16-Jun | 0 | 4 | 26-Jul | 2 | 1,779 |
| 17-Jun | 2 | 6 | 27-Jul | 1 | 1,780 |
| 18-Jun | 0 | 6 | 28-Jul | 0 | 1,780 |
| 19-Jun | 0 | 6 | 29-Jul | 9 | 1,789 |
| 20-Jun | 17 | 23 | 30-Jul | 9 | 1,798 |
| 21-Jun | 24 | 47 | 31-Jul | 22 | 1,820 |
| 22-Jun | 12 | 59 | 01-Aug | 22 | 1,842 |
| 23-Jun | 0 | 59 | 02-Aug | 5 | 1,847 |
| 24-Jun | 27 | 86 | 03-Aug | 3 | 1,850 |
| 25-Jun | 6 | 92 | 04-Aug | 12 | 1,862 |
| 26-Jun | 46 | 138 | 05-Aug | 3 | 1,865 |
| 27-Jun | 18 | 156 | 06-Aug | 12 | 1,877 |
| 28-Jun | 29 | 185 | 07-Aug | 5 | 1,882 |
| 29-Jun | 22 | 207 | 08-Aug | 1 | 1,883 |
| 30-Jun | 24 | 231 | 09-Aug | 27 | 1,910 |
| 01-Jul | 9 | 240 | 10-Aug | 12 | 1,922 |
| 02-Jul | 101 | 341 | 11-Aug | 23 | 1,945 |
| 03-Jul | 121 | 462 | 12-Aug | 0 | 1,945 |
| 04-Jul | 41 | 503 | 13-Aug | 1 | 1,946 |
| 05-Jul | 47 | 550 | 14-Aug | Weir Out | |
| 06-Jul | 84 | 634 | | | |

^a Escapement estimates are considered conservative due to the difficulty in distinguishing small chinook from sockeye as they pass through the weir.

^b No adjustment made for escapement after removal of the weir on 14-August.

Table 13. Chignik weir sockeye salmon daily escapement counts, 1993.

| Date | Escapement | | Date | Escapement | |
|--------|------------|------------|---------------------|------------|------------|
| | Daily | Cumulative | | Daily | Cumulative |
| 28-May | 104 | 104 | 07-Jul | 34,364 | 469,562 |
| 29-May | 129 | 233 | 08-Jul | 17,618 | 487,180 |
| 30-May | 271 | 504 | 09-Jul | 2,838 | 490,018 |
| 31-May | 192 | 696 | 10-Jul | 2,194 | 492,212 |
| 01-Jun | 296 | 992 | 11-Jul | 2,362 | 494,574 |
| 02-Jun | 163 | 1,155 | 12-Jul | 1,733 | 496,307 |
| 03-Jun | 700 | 1,855 | 13-Jul | 1,533 | 497,840 |
| 04-Jun | 1,405 | 3,260 | 14-Jul | 815 | 498,655 |
| 05-Jun | 2,240 | 5,500 | 15-Jul | 780 | 499,435 |
| 06-Jun | 5,679 | 11,179 | 16-Jul | 1,541 | 500,976 |
| 07-Jun | 7,568 | 18,747 | 17-Jul | 1,240 | 502,216 |
| 08-Jun | 14,437 | 33,184 | 18-Jul | 4,768 | 506,984 |
| 09-Jun | 10,321 | 43,505 | 19-Jul | 12,970 | 519,954 |
| 10-Jun | 17,131 | 60,636 | 20-Jul | 17,571 | 537,525 |
| 11-Jun | 15,245 | 75,881 | 21-Jul | 26,261 | 563,786 |
| 12-Jun | 23,212 | 99,093 | 22-Jul | 5,849 | 569,635 |
| 13-Jun | 22,150 | 121,243 | 23-Jul | 3,030 | 572,665 |
| 14-Jun | 22,776 | 144,019 | 24-Jul | 1,475 | 574,140 |
| 15-Jun | 31,479 | 175,498 | 25-Jul | 2,148 | 576,288 |
| 16-Jun | 30,118 | 205,616 | 26-Jul | 766 | 577,054 |
| 17-Jun | 23,741 | 229,357 | 27-Jul | 1,765 | 578,819 |
| 18-Jun | 30,088 | 259,445 | 28-Jul | 80 | 578,899 |
| 19-Jun | 53,699 | 313,144 | 29-Jul | 75 | 578,974 |
| 20-Jun | 24,917 | 338,061 | 30-Jul | 312 | 579,286 |
| 21-Jun | 5,418 | 343,479 | 31-Jul | 4,597 | 583,883 |
| 22-Jun | 2,365 | 345,844 | 01-Aug | 3,704 | 587,587 |
| 23-Jun | 1,554 | 347,398 | 02-Aug | 10,535 | 598,122 |
| 24-Jun | 3,166 | 350,564 | 03-Aug | 6,097 | 604,219 |
| 25-Jun | 3,795 | 354,359 | 04-Aug | 2,472 | 606,691 |
| 26-Jun | 1,728 | 356,087 | 05-Aug | 1,519 | 608,210 |
| 27-Jun | 3,226 | 359,313 | 06-Aug | 1,348 | 609,558 |
| 28-Jun | 3,721 | 363,034 | 07-Aug | 3,735 | 613,293 |
| 29-Jun | 7,075 | 370,109 | 08-Aug | 7,759 | 621,052 |
| 30-Jun | 18,877 | 388,986 | 09-Aug | 8,563 | 629,615 |
| 01-Jul | 5,301 | 394,287 | 10-Aug | 7,259 | 636,874 |
| 02-Jul | 4,606 | 398,893 | 11-Aug | 3,903 | 640,777 |
| 03-Jul | 2,970 | 401,863 | 12-Aug | 1,288 | 642,065 |
| 04-Jul | 2,119 | 403,982 | 13-Aug | 1,225 | 643,290 |
| 05-Jul | 4,211 | 408,193 | 14-Aug ^a | Weir Out | |
| 06-Jul | 27,005 | 435,198 | 15-Sep | 54,087 | 697,377 |

^a Time series analysis (autoregressive intergrated moving average) of catch and escapement was used to estimate sockeye salmon escapements after weir removal on 14-Aug.

Table 14. Black Lake sockeye salmon age composition determined from scale samples collected from the Black Lake outlet, 1993.

| Dates | Sample Size (n) | Percent Composition | | | | | | | |
|--------|-----------------|---------------------|-----|------|------|-----|-----|------|-----|
| | | 0.3 | 1.1 | 1.2 | 1.3 | 1.4 | 2.2 | 2.3 | 2.4 |
| 15-Jun | 219 | 0.0 | 1.4 | 17.4 | 64.4 | 0.9 | 3.7 | 12.3 | 0.0 |
| 16-Jun | 294 | 0.0 | 0.0 | 15.3 | 67.0 | 1.0 | 3.4 | 13.3 | 0.0 |
| 17-Jun | 353 | 0.3 | 0.0 | 11.0 | 68.6 | 0.3 | 4.5 | 15.0 | 0.3 |
| 18-Jun | 178 | 0.0 | 0.0 | 12.9 | 61.2 | 0.0 | 3.9 | 21.3 | 0.6 |
| 20-Jun | 746 | 0.0 | 0.3 | 17.2 | 61.7 | 1.7 | 3.4 | 15.5 | 0.3 |
| | 1,790 | 0.1 | 0.3 | 15.3 | 64.2 | 1.1 | 3.7 | 15.3 | 0.2 |

Table 15. Chignik Lagoon sockeye and chinook salmon age composition determined from commercial fishery scale samples, 1993.

| Date | Sample Size (n) | Sockeye Age Composition (Percent) | | | | | | | | | | | | |
|---------------|-----------------|-----------------------------------|-----|-----|------|-----|------|------|-----|-----|------|-----|-----|-----|
| | | 0.2 | 1.1 | 0.3 | 1.2 | 2.1 | 1.3 | 2.2 | 3.1 | 1.4 | 2.3 | 3.2 | 2.4 | 3.3 |
| 6/09 | 515 | 0.0 | 0.0 | 0.0 | 7.6 | 0.0 | 62.7 | 5.0 | 0.0 | 0.6 | 23.5 | 0.2 | 0.4 | 0.0 |
| 6/12 | 524 | 0.0 | 0.0 | 0.0 | 7.3 | 0.0 | 61.6 | 4.0 | 0.0 | 1.1 | 25.6 | 0.0 | 0.2 | 0.2 |
| 6/15 | 509 | 0.2 | 0.0 | 0.4 | 13.2 | 0.2 | 56.6 | 4.9 | 0.0 | 1.2 | 22.6 | 0.4 | 0.2 | 0.2 |
| 6/21 | 524 | 0.0 | 0.0 | 0.6 | 24.4 | 0.4 | 40.5 | 14.1 | 0.0 | 0.6 | 19.1 | 0.2 | 0.2 | 0.0 |
| 6/25 | 532 | 0.4 | 0.0 | 0.2 | 20.7 | 0.2 | 49.4 | 10.2 | 0.0 | 1.1 | 17.7 | 0.0 | 0.2 | 0.0 |
| 6/27 | 549 | 0.0 | 0.2 | 0.5 | 21.3 | 0.2 | 44.3 | 10.2 | 0.2 | 0.9 | 21.1 | 0.4 | 0.5 | 0.2 |
| 7/01 | 506 | 0.0 | 0.2 | 0.6 | 18.2 | 0.4 | 31.2 | 10.3 | 0.0 | 0.8 | 37.5 | 0.2 | 0.6 | 0.0 |
| 7/04 | 521 | 0.2 | 0.0 | 0.6 | 22.1 | 0.2 | 24.2 | 13.4 | 0.0 | 0.2 | 38.8 | 0.2 | 0.2 | 0.0 |
| 7/07 | 520 | 0.0 | 0.0 | 0.0 | 9.6 | 0.4 | 17.9 | 10.2 | 0.0 | 0.4 | 60.4 | 0.0 | 1.2 | 0.0 |
| 7/10 | 533 | 0.0 | 0.0 | 0.8 | 8.6 | 0.0 | 12.0 | 9.8 | 0.0 | 0.0 | 67.4 | 0.0 | 1.3 | 0.2 |
| 7/17 | 468 | 0.0 | 0.0 | 0.6 | 5.3 | 0.0 | 13.5 | 4.5 | 0.0 | 0.2 | 73.9 | 0.9 | 0.6 | 0.4 |
| 7/23 | 475 | 0.0 | 0.0 | 0.8 | 4.2 | 0.0 | 11.6 | 2.9 | 0.0 | 0.6 | 78.9 | 0.2 | 0.6 | 0.0 |
| 8/02 | 486 | 0.0 | 0.0 | 0.8 | 14.0 | 0.8 | 4.7 | 5.1 | 0.0 | 0.0 | 71.4 | 1.4 | 1.4 | 0.2 |
| 8/11 | 163 | 0.0 | 0.0 | 0.6 | 8.0 | 1.8 | 2.5 | 1.8 | 0.0 | 0.6 | 82.2 | 0.6 | 1.8 | 0.0 |
| 8/13 | 805 | 0.0 | 0.1 | 0.2 | 3.2 | 0.0 | 4.6 | 2.1 | 0.0 | 0.0 | 89.2 | 0.1 | 0.4 | 0.0 |
| 8/18 | 495 | 0.0 | 0.2 | 0.2 | 3.6 | 1.6 | 2.4 | 3.4 | 0.0 | 0.2 | 86.7 | 0.4 | 1.2 | 0.0 |
| 8/23 | 498 | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 2.4 | 2.6 | 0.0 | 0.0 | 93.6 | 0.0 | 0.2 | 0.0 |
| Total = 8,623 | | 0.0 | 0.0 | 0.3 | 11.0 | 0.2 | 26.6 | 6.8 | 0.0 | 0.4 | 52.8 | 0.2 | 0.6 | 0.0 |

| Date | Sample Size (n) | King Age Composition (Percent) | | | | |
|---------------|-----------------------|--------------------------------|------|------|------|-----|
| | | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 |
| All Season | 183 | 1.1 | 16.9 | 27.3 | 50.3 | 4.4 |

Table 16. Chignik and Black Lake sockeye salmon escapements through the Chignik River weir using daily percentages derived from the inseason scale pattern analysis time of entry curve, 1993.

| Date | Total | | Chignik Lake | | Black Lake |
|--------|--------|------------|---------------|------------|------------|
| | Daily | Cumulative | Percent Daily | Cumulative | Cumulative |
| 28-May | 104 | 104 | 0.000 | 0 | 104 |
| 29-May | 129 | 233 | 0.000 | 0 | 233 |
| 30-May | 271 | 504 | 0.000 | 0 | 504 |
| 31-May | 192 | 696 | 0.010 | 2 | 694 |
| 01-Jun | 296 | 992 | 0.011 | 3 | 987 |
| 02-Jun | 163 | 1,155 | 0.013 | 2 | 1,148 |
| 03-Jun | 700 | 1,855 | 0.015 | 10 | 1,838 |
| 04-Jun | 1,405 | 3,260 | 0.017 | 23 | 3,220 |
| 05-Jun | 2,240 | 5,500 | 0.019 | 43 | 5,417 |
| 06-Jun | 5,679 | 11,179 | 0.022 | 124 | 10,972 |
| 07-Jun | 7,568 | 18,747 | 0.025 | 189 | 18,351 |
| 08-Jun | 14,437 | 33,184 | 0.029 | 413 | 32,375 |
| 09-Jun | 10,321 | 43,505 | 0.033 | 338 | 42,358 |
| 10-Jun | 17,131 | 60,636 | 0.037 | 641 | 58,848 |
| 11-Jun | 15,245 | 75,881 | 0.043 | 652 | 73,441 |
| 12-Jun | 23,212 | 99,093 | 0.049 | 1,133 | 95,520 |
| 13-Jun | 22,150 | 121,243 | 0.056 | 1,233 | 116,437 |
| 14-Jun | 22,776 | 144,019 | 0.063 | 1,445 | 137,768 |
| 15-Jun | 31,479 | 175,498 | 0.072 | 2,272 | 166,975 |
| 16-Jun | 30,118 | 205,616 | 0.082 | 2,471 | 194,622 |
| 17-Jun | 23,741 | 229,357 | 0.093 | 2,211 | 216,152 |
| 18-Jun | 30,088 | 259,445 | 0.106 | 3,174 | 243,066 |
| 19-Jun | 53,699 | 313,144 | 0.119 | 6,408 | 290,357 |
| 20-Jun | 24,917 | 338,061 | 0.135 | 3,356 | 311,918 |
| 21-Jun | 5,418 | 343,479 | 0.152 | 822 | 316,514 |
| 22-Jun | 2,365 | 345,844 | 0.170 | 403 | 318,476 |
| 23-Jun | 1,554 | 347,398 | 0.191 | 297 | 319,733 |
| 24-Jun | 3,166 | 350,564 | 0.213 | 675 | 322,224 |
| 25-Jun | 3,795 | 354,359 | 0.237 | 901 | 325,118 |
| 26-Jun | 1,728 | 356,087 | 0.263 | 455 | 326,391 |
| 27-Jun | 3,226 | 359,313 | 0.291 | 940 | 328,677 |
| 28-Jun | 3,721 | 363,034 | 0.321 | 1,193 | 331,205 |
| 29-Jun | 7,075 | 370,109 | 0.352 | 2,488 | 335,792 |
| 30-Jun | 18,877 | 388,986 | 0.384 | 7,246 | 347,423 |
| 01-Jul | 5,301 | 394,287 | 0.417 | 2,211 | 350,513 |
| 02-Jul | 4,606 | 398,893 | 0.451 | 2,078 | 353,041 |
| 03-Jul | 2,970 | 401,863 | 0.486 | 1,443 | 354,568 |
| 04-Jul | 2,119 | 403,982 | 0.520 | 1,102 | 355,585 |
| 05-Jul | 4,211 | 408,193 | 0.555 | 2,337 | 357,459 |
| 06-Jul | 27,005 | 435,198 | 0.580 | 15,663 | 368,801 |
| 07-Jul | 34,364 | 469,562 | 0.622 | 21,374 | 381,791 |
| 08-Jul | 17,618 | 487,180 | 0.654 | 11,522 | 387,887 |
| 09-Jul | 2,838 | 490,018 | 0.685 | 1,944 | 388,781 |
| 10-Jul | 2,194 | 492,212 | 0.714 | 1,567 | 389,408 |
| 11-Jul | 2,362 | 494,574 | 0.741 | 1,750 | 390,020 |
| 12-Jul | 1,733 | 496,307 | 0.767 | 1,329 | 390,424 |
| 13-Jul | 1,533 | 497,840 | 0.791 | 1,213 | 390,744 |
| 14-Jul | 815 | 498,655 | 0.813 | 663 | 390,896 |

-Continued-

Table 16. (page 2 of 2)

| Date | Total | | Chignik Lake | | | Black Lake |
|--------|--------|------------|--------------|--------|------------|------------|
| | Daily | Cumulative | Percent | Daily | Cumulative | Cumulative |
| 15-Jul | 780 | 499,435 | 0.833 | 650 | 108,409 | 391,026 |
| 16-Jul | 1,541 | 500,976 | 0.851 | 1,311 | 109,720 | 391,256 |
| 17-Jul | 1,240 | 502,216 | 0.868 | 1,076 | 110,796 | 391,420 |
| 18-Jul | 4,768 | 506,984 | 0.883 | 4,210 | 115,006 | 391,978 |
| 19-Jul | 12,970 | 519,954 | 0.897 | 11,634 | 126,640 | 393,314 |
| 20-Jul | 17,571 | 537,525 | 0.909 | 15,972 | 142,612 | 394,913 |
| 21-Jul | 26,261 | 563,786 | 0.920 | 24,160 | 166,772 | 397,014 |
| 22-Jul | 5,849 | 569,635 | 0.929 | 5,434 | 172,206 | 397,429 |
| 23-Jul | 3,030 | 572,665 | 0.938 | 2,842 | 175,048 | 397,617 |
| 24-Jul | 1,475 | 574,140 | 0.946 | 1,395 | 176,443 | 397,697 |
| 25-Jul | 2,148 | 576,288 | 0.952 | 2,045 | 178,488 | 397,800 |
| 26-Jul | 766 | 577,054 | 0.958 | 734 | 179,222 | 397,832 |
| 27-Jul | 1,765 | 578,819 | 0.963 | 1,700 | 180,922 | 397,897 |
| 28-Jul | 80 | 578,899 | 0.968 | 77 | 180,999 | 397,900 |
| 29-Jul | 75 | 578,974 | 0.972 | 73 | 181,072 | 397,902 |
| 30-Jul | 312 | 579,286 | 0.976 | 305 | 181,377 | 397,909 |
| 31-Jul | 4,597 | 583,883 | 0.979 | 4,500 | 185,877 | 398,006 |
| 01-Aug | 3,704 | 587,587 | 0.981 | 3,634 | 189,511 | 398,076 |
| 02-Aug | 10,535 | 598,122 | 0.984 | 10,366 | 199,877 | 398,245 |
| 03-Aug | 6,097 | 604,219 | 0.986 | 6,012 | 205,889 | 398,330 |
| 04-Aug | 2,472 | 606,691 | 0.988 | 2,442 | 208,331 | 398,360 |
| 05-Aug | 1,519 | 608,210 | 0.989 | 1,502 | 209,833 | 398,377 |
| 06-Aug | 1,348 | 609,558 | 0.991 | 1,336 | 211,169 | 398,389 |
| 07-Aug | 3,735 | 613,293 | 0.992 | 3,705 | 214,874 | 398,419 |
| 08-Aug | 7,759 | 621,052 | 0.993 | 7,705 | 222,579 | 398,473 |
| 09-Aug | 8,563 | 629,615 | 0.994 | 8,512 | 231,091 | 398,524 |
| 10-Aug | 7,259 | 636,874 | 0.995 | 7,223 | 238,314 | 398,560 |
| 11-Aug | 3,903 | 640,777 | 0.996 | 3,887 | 242,201 | 398,576 |
| 12-Aug | 1,288 | 642,065 | 0.997 | 1,284 | 243,485 | 398,580 |
| 13-Aug | 1,225 | 643,290 | 0.998 | 1,223 | 244,708 | 398,582 |

Table 17. Harvest of Chignik bound sockeye salmon in the Chignik, Cape Igvak, and Southeast District Mainland Areas^a from 1964-1993.

| Year | Southeast District | | | | | | Total |
|-------------------|--------------------|---------|------------|---------|---------------|---------|-----------|
| | Chignik Area | | Cape Iqvak | | Mainland Area | | |
| | Catch | Percent | Catch | Percent | Catch | Percent | |
| 1964 ^b | 556,890 | 90.57 | 14,980 | 2.44 | 43,021 | 7.00 | 614,891 |
| 1965 | 599,553 | 89.94 | 11,021 | 1.65 | 56,020 | 8.40 | 666,594 |
| 1966 | 219,794 | 87.99 | 18,003 | 7.21 | 12,011 | 4.81 | 249,808 |
| 1967 | 462,000 | 91.48 | 23,014 | 4.56 | 20,021 | 3.96 | 505,035 |
| 1968 | 977,382 | 82.53 | 135,951 | 11.48 | 70,959 | 5.99 | 1,184,292 |
| 1969 | 394,135 | 78.96 | 97,982 | 19.63 | 7,013 | 1.41 | 499,130 |
| 1970 ^c | 1,325,734 | 72.51 | 434,394 | 23.76 | 68,181 | 3.73 | 1,828,309 |
| 1971 | 1,016,136 | 80.33 | 197,614 | 15.62 | 51,272 | 4.05 | 1,265,022 |
| 1972 | 378,218 | 87.99 | 33,865 | 7.88 | 17,752 | 4.13 | 429,815 |

1964-72 catch and percentage figures are total for the entire season. Catch figures and percentages after 1972 are only through July 25.

| | | | | | | | |
|----------------------|-----------|-------|---------|-------|---------|-------|-----------|
| 1973 ^d | 769,258 | 89.01 | 57,348 | 6.64 | 37,613 | 4.35 | 864,219 |
| 1974 | 530,278 | 73.97 | 122,071 | 17.03 | 64,564 | 9.01 | 716,913 |
| 1975 | 115,984 | 81.78 | 23,635 | 16.67 | 2,205 | 1.55 | 141,824 |
| 1976 | 792,024 | 83.08 | 117,926 | 12.37 | 43,356 | 4.55 | 953,306 |
| 1977 | 1,547,285 | 90.61 | 128,852 | 7.55 | 31,498 | 1.84 | 1,707,635 |
| 1978 ^{e, f} | 1,454,389 | 85.38 | 227,014 | 13.33 | 21,952 | 1.29 | 1,703,355 |
| 1979 ^g | 794,504 | 80.30 | 13,950 | 1.61 | 55,352 | 6.41 | 863,806 |
| 1980 | 670,001 | 91.33 | 32 | 0.00 | 63,570 | 8.67 | 733,603 |
| 1981 | 1,606,300 | 79.88 | 282,727 | 14.06 | 121,870 | 6.06 | 2,010,897 |
| 1982 | 1,250,768 | 84.46 | 167,401 | 11.30 | 62,767 | 4.24 | 1,480,936 |
| 1983 | 1,450,832 | 72.68 | 318,048 | 15.93 | 227,392 | 11.39 | 1,996,272 |
| 1984 | 2,474,405 | 73.93 | 449,372 | 13.43 | 423,068 | 12.64 | 3,346,845 |
| 1985 ^h | 696,169 | 79.91 | 123,627 | 14.19 | 51,421 | 5.90 | 871,217 |
| 1986 | 1,456,729 | 82.64 | 188,017 | 10.67 | 118,006 | 6.69 | 1,762,752 |
| 1987 | 1,659,915 | 77.98 | 321,746 | 15.12 | 146,886 | 6.90 | 2,128,547 |
| 1988 | 678,912 | 95.70 | 11,218 | 1.58 | 19,320 | 2.72 | 709,450 |
| 1989 | 502,477 | 99.12 | 0 | 0.00 | 4,485 | 0.88 | 506,962 |
| 1990 | 1,211,097 | 83.67 | 107,706 | 7.44 | 128,599 | 8.88 | 1,447,402 |
| 1991 ⁱ | 1,966,986 | 80.48 | 324,329 | 13.27 | 152,714 | 6.25 | 2,444,029 |
| 1992 ^j | 1,066,732 | 81.25 | 152,358 | 11.60 | 93,845 | 7.15 | 1,312,935 |
| 1993 | 1,488,557 | 77.64 | 300,055 | 15.65 | 128,536 | 6.70 | 1,917,148 |

^a The Cape Igvak and Southeast District Mainland figures represent 80% of the total sockeye catches for those areas as it is estimated that roughly 80% of the sockeye caught in the Cape Igvak section and Southeast District Mainland Area (excluding sockeye caught in Northwest Stepovak Section from 1964-1991 and in Orzinski bay in 1992) are destined for Chignik.

^b The data from 1964-1972 are based on total yearly catches. Prior to 1973, Cape Igvak and Southeast District Mainland fisheries were set by regulation to weekly fishing periods, usually 5 days per week. Time modifications were implemented when poor escapements occurred at Chignik.

^c Catches (1970-1992) were updated using historical electronic fish ticket databases.

^d During 1973 through 1977 all three fisheries were managed on a day by day basis.

-Continued-

Table 17. (page 2 of 2)

-
- ^e From 1978-1991, the Cape Igvak Fishery Management Plan allocated 15 percent of the total sockeye catch destined for Chignik.
- ^f During 1978, seining prior to July 11 was disallowed in the Southeast District Mainland. The set gillnet fishery was allowed to fish 3 days per week through July 10 after which the fishery was managed on the basis of local stocks.
- ^g During 1979-1984 and prior to July 11, fishing was allowed 5 days per week in the Southeast District Mainland Area with a ceiling of an estimated 60,000 sockeye destined for Chignik. If the Chignik Area sockeye catch was 1,000,000 or more before July 11, the 60,000 ceiling was to be dropped.
- ^h Beginning in 1985, Southeast District Mainland Area (excluding the Northwest Stepovak Section from 1964-1991 and Orzinski Bay statistical area) was placed on an allocation of 6.2 percent of the total estimated Chignik sockeye catch through July 25. After July 25, the Southeast District Mainland is managed on a local stock basis. The allocation changed to 6.0 percent beginning in 1988. Seining is still not allowed prior to July 11.
- ⁱ Includes overescapement of 278,305 sockeye counted past the weir during the Chignik Area seiners' boycott (Jun 23-Jul 4).
- ^j Review of Orzinski Lake historical and current escapement records led the Alaska Board of Fisheries to redefine the Southeast District Mainland Management Plan. Beginning in 1992, the Southeast District Mainland fishery (excluding Orzinski Bay) was placed on an allocation of 7.0 percent of the total estimated Chignik sockeye catch through July 25.
-

Table 18. Total Chignik Management Area and 80 percent of the sockeye harvest in the Cape Igvak and Southeast District Mainland Areas, 1964-1993.^a

| Year | Harvest To July 25 Only | | | | Harvest For Entire Season | | | |
|-------------------|-------------------------|------------|--------------------|-----------|---------------------------|------------|--------------------|-----------|
| | Chignik | Cape Igvak | Southeast Mainland | Total | Chignik | Cape Igvak | Southeast Mainland | Total |
| 1964 | - | - | - | - | 556,890 | 14,980 | 43,021 | 614,891 |
| 1965 | - | - | - | - | 599,553 | 11,021 | 56,020 | 666,594 |
| 1966 | - | - | - | - | 219,794 | 18,003 | 12,011 | 249,808 |
| 1967 | - | - | - | - | 462,000 | 23,014 | 20,021 | 505,035 |
| 1968 | - | - | - | - | 977,382 | 135,951 | 70,959 | 1,184,292 |
| 1969 | - | - | - | - | 394,135 | 97,982 | 7,013 | 499,130 |
| 1970 | - | - | - | - | 1,325,734 | 434,394 | 68,181 | 1,828,309 |
| 1971 | - | - | - | - | 1,016,136 | 197,614 | 51,272 | 1,265,022 |
| 1972 | - | - | - | - | 378,218 | 33,865 | 17,752 | 429,835 |
| 1973 | 769,258 | 57,348 | 37,613 | 864,219 | 870,354 | 57,348 | 38,266 | 965,968 |
| 1974 | 530,278 | 122,071 | 64,564 | 716,913 | 662,905 | 122,071 | 65,514 | 850,490 |
| 1975 | 115,984 | 23,635 | 2,205 | 141,824 | 399,593 | 23,635 | 2,205 | 425,433 |
| 1976 | 792,024 | 117,926 | 43,356 | 953,306 | 1,163,728 | 117,978 | 44,781 | 1,326,487 |
| 1977 | 1,547,285 | 128,852 | 31,498 | 1,707,635 | 1,972,207 | 128,852 | 35,401 | 2,136,460 |
| 1978 | 1,454,389 | 227,014 | 21,952 | 1,703,355 | 1,576,283 | 227,052 | 23,990 | 1,825,325 |
| 1979 | 794,504 | 13,950 | 55,352 | 863,806 | 1,049,497 | 20,436 | 82,153 | 1,152,086 |
| 1980 | 670,001 | 32 | 63,570 | 733,603 | 859,966 | 631 | 88,046 | 948,643 |
| 1981 | 1,606,300 | 282,727 | 121,870 | 2,010,897 | 1,839,469 | 284,211 | 166,034 | 2,289,714 |
| 1982 | 1,250,768 | 167,401 | 62,767 | 1,480,936 | 1,521,686 | 168,295 | 86,849 | 1,776,830 |
| 1983 | 1,450,832 | 318,048 | 227,392 | 1,996,272 | 1,824,175 | 323,004 | 297,429 | 2,444,608 |
| 1984 | 2,474,405 | 449,372 | 423,068 | 3,346,845 | 2,660,619 | 450,066 | 487,938 | 3,598,623 |
| 1985 | 696,169 | 123,627 | 51,421 | 871,217 | 922,151 | 125,134 | 93,206 | 1,140,491 |
| 1986 | 1,456,729 | 188,017 | 118,006 | 1,762,752 | 1,645,834 | 188,129 | 147,056 | 1,981,019 |
| 1987 | 1,659,915 | 321,746 | 146,886 | 2,128,547 | 1,898,838 | 344,357 | 188,983 | 2,432,178 |
| 1988 | 678,912 | 11,218 | 19,320 | 709,450 | 795,841 | 28,783 | 79,101 | 903,725 |
| 1989 | 502,477 | - | 4,485 | 506,962 | 1,159,287 | - | 138,594 | 1,297,881 |
| 1990 | 1,211,097 | 107,706 | 128,599 | 1,447,402 | 2,093,650 | 133,821 | 216,944 | 2,444,415 |
| 1991 ^b | 1,966,986 | 324,329 | 152,714 | 2,444,029 | 2,173,970 | 341,869 | 228,934 | 2,744,773 |
| 1992 | 1,066,732 | 152,358 | 93,845 | 1,312,935 | 1,277,449 | 156,318 | 177,713 | 1,611,480 |
| 1993 | 1,488,557 | 300,055 | 128,536 | 1,917,148 | 1,697,351 | 329,905 | 222,591 | 2,249,847 |

^a Catches (1970-1992) were updated using historical electronic fish ticket databases.

^b Includes overescapement of 278,305 sockeye counted past the weir during the Chignik Area Seiners' boycott (June 23 - July 4).

Table 19. The Chignik Lakes system stock composition estimates from the scale pattern analysis of age 1.3 sockeye salmon from commercial catch samples, 1993.

| Sample Date | Sample Size (n) | Stock | Adjusted Estimate | Estimated Variance | Smoothed ^a Estimate | Smoothed Estimated Variance |
|-------------|-----------------|--------------|-------------------|--------------------|--------------------------------|-----------------------------|
| 09 Jun | 98 | Black Lake | 0.578 | 0.01119 | 0.832 | 0.00677 |
| | | Chignik Lake | 0.422 | 0.01119 | 0.168 | 0.00677 |
| 15 Jun | 81 | Black Lake | 0.919 | 0.00911 | 0.725 | 0.01016 |
| | | Chignik Lake | 0.081 | 0.00911 | 0.275 | 0.01016 |
| 21 Jun | 105 | Black Lake | 0.679 | 0.01018 | 0.778 | 0.00995 |
| | | Chignik Lake | 0.321 | 0.01018 | 0.222 | 0.00995 |
| 25 Jun | 97 | Black Lake | 0.735 | 0.01055 | 0.727 | 0.01023 |
| | | Chignik Lake | 0.265 | 0.01055 | 0.273 | 0.01023 |
| 27 Jun | 102 | Black Lake | 0.768 | 0.00994 | 0.713 | 0.01048 |
| | | Chignik Lake | 0.232 | 0.00994 | 0.287 | 0.01048 |
| 01 Jul | 99 | Black Lake | 0.635 | 0.01093 | 0.713 | 0.01082 |
| | | Chignik Lake | 0.365 | 0.01093 | 0.287 | 0.01082 |
| 03 Jul | 86 | Black Lake | 0.735 | 0.01158 | 0.671 | 0.01258 |
| | | Chignik Lake | 0.265 | 0.01158 | 0.329 | 0.01258 |
| 07 Jul | 66 | Black Lake | 0.644 | 0.01523 | 0.769 | 0.01621 |
| | | Chignik Lake | 0.356 | 0.01523 | 0.231 | 0.01621 |
| 10 Jul | 35 | Black Lake | 0.928 | 0.02182 | 0.748 | 0.02049 |
| | | Chignik Lake | 0.072 | 0.02182 | 0.252 | 0.02049 |
| 16 Jul | 38 | Black Lake | 0.671 | 0.02441 | 0.533 | 0.02105 |
| | | Chignik Lake | 0.329 | 0.02441 | 0.467 | 0.02105 |
| 23 Jul | 101 | Black Lake | 0.000 | 0.01692 | 0.224 | 0.01942 |
| | | Chignik Lake | 1.000 | 0.01692 | 0.776 | 0.01942 |

^a Smoothing was done by a running average of 3, assuming an initial proportion of 0.0 and an ending proportion of 1.0 for Chignik Lake.

Table 20. The Chignik Lakes system stock composition estimates from the scale pattern analysis of age 2.3 sockeye salmon from the commercial catch, 1993.

| Sample Date | Sample Size (n) | Stock | Adjusted Estimate | Estimated Variance | Smoothed ^a Estimate | Smoothed Estimated Variance |
|-------------|-----------------|--------------|-------------------|--------------------|--------------------------------|-----------------------------|
| 09 Jun | 64 | Black Lake | 0.646 | 0.01265 | 0.789 | 0.00857 |
| | | Chignik Lake | 0.354 | 0.01265 | 0.211 | 0.00857 |
| 15 Jun | 61 | Black Lake | 0.720 | 0.01306 | 0.776 | 0.01325 |
| | | Chignik Lake | 0.280 | 0.01306 | 0.224 | 0.01325 |
| 21 Jun | 48 | Black Lake | 0.963 | 0.01405 | 0.773 | 0.01344 |
| | | Chignik Lake | 0.037 | 0.01405 | 0.227 | 0.01344 |
| 25 Jun | 61 | Black Lake | 0.637 | 0.01320 | 0.763 | 0.01256 |
| | | Chignik Lake | 0.363 | 0.01320 | 0.237 | 0.01256 |
| 27 Jun | 80 | Black Lake | 0.688 | 0.01043 | 0.593 | 0.01072 |
| | | Chignik Lake | 0.312 | 0.01043 | 0.407 | 0.01072 |
| 01 Jul | 98 | Black Lake | 0.454 | 0.00854 | 0.544 | 0.00917 |
| | | Chignik Lake | 0.546 | 0.00854 | 0.456 | 0.00917 |
| 03 Jul | 100 | Black Lake | 0.489 | 0.00854 | 0.380 | 0.00821 |
| | | Chignik Lake | 0.511 | 0.00854 | 0.620 | 0.00821 |
| 07 Jul | 101 | Black Lake | 0.196 | 0.00756 | 0.294 | 0.00788 |
| | | Chignik Lake | 0.804 | 0.00756 | 0.706 | 0.00788 |
| 10 Jul | 101 | Black Lake | 0.196 | 0.00756 | 0.196 | 0.00742 |
| | | Chignik Lake | 0.804 | 0.00756 | 0.804 | 0.00742 |
| 16 Jul | 108 | Black Lake | 0.195 | 0.00714 | 0.168 | 0.00735 |
| | | Chignik Lake | 0.805 | 0.00714 | 0.832 | 0.00735 |
| 23 Jul | 97 | Black Lake | 0.112 | 0.00735 | 0.102 | 0.00728 |
| | | Chignik Lake | 0.888 | 0.00735 | 0.898 | 0.00728 |

^a Smoothing was done by a running average of 3, assuming an initial proportion of 0.0 and an ending proportion of 1.0 for Chignik Lake.

Table 21. Chignik Management Area daily sockeye salmon escapement, catch by area, and run adjusted to Chignik Lagoon date, 1993.

| Date | Escapement | Chignik Lagoon | Hook Bay /Kujulik | Aniakchak | Eastern District | Cape Igvak | Western District | Perryville District | Southeast Mainland | Daily Total |
|--------|------------|----------------|-------------------|-----------|------------------|------------|------------------|---------------------|--------------------|-------------|
| May 27 | 104 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 104 |
| May 28 | 129 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 129 |
| May 29 | 271 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 271 |
| May 30 | 192 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 192 |
| May 31 | 296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 296 |
| Jun 1 | 163 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 163 |
| Jun 2 | 700 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 700 |
| Jun 3 | 1,405 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,405 |
| Jun 4 | 2,240 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,240 |
| Jun 5 | 5,679 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5,679 |
| Jun 6 | 7,568 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7,568 |
| Jun 7 | 14,437 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14,437 |
| Jun 8 | 10,321 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10,321 |
| Jun 9 | 17,131 | 695 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17,826 |
| Jun 10 | 15,245 | 947 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16,192 |
| Jun 11 | 23,212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23,212 |
| Jun 12 | 22,150 | 1,660 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23,810 |
| Jun 13 | 22,776 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22,776 |
| Jun 14 | 31,479 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31,479 |
| Jun 15 | 30,118 | 2,059 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32,177 |
| Jun 16 | 23,741 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23,741 |
| Jun 17 | 30,088 | 6,541 | 0 | 0 | 0 | 6,530 | 0 | 0 | 3,548 | 46,707 |
| Jun 18 | 53,699 | 0 | 0 | 0 | 0 | 23,803 | 0 | 0 | 2,463 | 79,965 |
| Jun 19 | 24,917 | 24,598 | 0 | 0 | 0 | 17,752 | 0 | 0 | 0 | 67,267 |
| Jun 20 | 5,418 | 43,250 | 0 | 0 | 0 | 20,623 | 0 | 0 | 6,848 | 76,139 |
| Jun 21 | 2,365 | 34,780 | 16,258 | 0 | 0 | 5,018 | 0 | 0 | 12,756 | 71,177 |
| Jun 22 | 1,554 | 21,056 | 13,180 | 2,540 | 1,536 | 0 | 0 | 0 | 1,822 | 41,688 |
| Jun 23 | 3,166 | 21,361 | 25,770 | 6,962 | 2,659 | 262 | 0 | 0 | 0 | 60,180 |
| Jun 24 | 3,795 | 19,451 | 14,812 | 2,028 | 9,521 | 0 | 0 | 0 | 0 | 49,607 |
| Jun 25 | 1,728 | 21,039 | 30,293 | 7,890 | 28,275 | 0 | 0 | 0 | 0 | 89,225 |
| Jun 26 | 3,226 | 25,987 | 20,546 | 1,612 | 12,410 | 0 | 0 | 0 | 0 | 63,781 |
| Jun 27 | 3,721 | 19,835 | 16,599 | 6,192 | 39,224 | 0 | 0 | 0 | 0 | 85,571 |
| Jun 28 | 7,075 | 12,891 | 18,055 | 9,918 | 24,010 | 0 | 0 | 0 | 0 | 71,949 |
| Jun 29 | 18,877 | 0 | 13,544 | 6,197 | 16,832 | 0 | 0 | 0 | 0 | 55,450 |
| Jun 30 | 5,301 | 23,995 | 0 | 5,333 | 7,407 | 288 | 0 | 0 | 0 | 42,324 |
| Jul 1 | 4,606 | 16,432 | 10,488 | 0 | 4,073 | 27,042 | 0 | 0 | 17,169 | 79,810 |
| Jul 2 | 2,970 | 22,864 | 20,804 | 9,461 | 0 | 39,388 | 0 | 0 | 10,953 | 106,440 |
| Jul 3 | 2,119 | 17,188 | 23,933 | 10,351 | 0 | 7,583 | 0 | 0 | 0 | 61,174 |
| Jul 4 | 4,211 | 9,424 | 22,436 | 8,451 | 0 | 0 | 0 | 0 | 0 | 44,522 |
| Jul 5 | 27,005 | 0 | 21,016 | 13,974 | 0 | 0 | 0 | 0 | 0 | 61,995 |
| Jul 6 | 34,364 | 0 | 0 | 7,311 | 0 | 91 | 0 | 0 | 0 | 41,766 |
| Jul 7 | 17,618 | 27,913 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45,531 |
| Jul 8 | 2,838 | 38,608 | 6,847 | 0 | 0 | 0 | 0 | 0 | 0 | 48,293 |

-Continued-

Table 21. (page 2 of 3)

| Date | Escapement | Chignik Lagoon | Hook Bay /Kujulik | Aniakchak | Eastern District | Cape Igvak | Western District | Perryville District | Southeast Mainland | Daily Total |
|--------|------------|----------------|-------------------|-----------|------------------|------------|------------------|---------------------|--------------------|-------------|
| Jul 9 | 2,194 | 18,066 | 15,231 | 74 | 0 | 0 | 838 | 0 | 0 | 36,403 |
| Jul 10 | 2,362 | 18,419 | 21,588 | 2,582 | 114 | 0 | 5,160 | 3,697 | 0 | 53,922 |
| Jul 11 | 1,733 | 19,678 | 13,502 | 0 | 10,894 | 0 | 4,241 | 19,855 | 0 | 69,903 |
| Jul 12 | 1,533 | 19,492 | 10,145 | 1,229 | 10,072 | 0 | 8,597 | 23,484 | 1,030 | 75,582 |
| Jul 13 | 815 | 22,346 | 7,909 | 1,653 | 5,108 | 0 | 4,867 | 10,620 | 1,142 | 54,460 |
| Jul 14 | 780 | 12,185 | 11,623 | 2,374 | 4,913 | 11,507 | 1,222 | 13,501 | 21,350 | 79,455 |
| Jul 15 | 1,541 | 10,551 | 10,915 | 1,592 | 2,387 | 18,646 | 82 | 11,043 | 0 | 56,757 |
| Jul 16 | 1,240 | 11,141 | 11,065 | 5,409 | 0 | 16,393 | 0 | 9,337 | 0 | 54,585 |
| Jul 17 | 4,768 | 0 | 13,430 | 3,733 | 750 | 18,992 | 0 | 0 | 0 | 41,673 |
| Jul 18 | 12,970 | 0 | 0 | 1,922 | 394 | 13,362 | 0 | 0 | 0 | 28,648 |
| Jul 19 | 17,571 | 0 | 0 | 0 | 528 | 24,202 | 0 | 0 | 32,674 | 74,975 |
| Jul 20 | 26,261 | 5,775 | 0 | 0 | 0 | 20,955 | 0 | 0 | 0 | 52,991 |
| Jul 21 | 5,849 | 11,254 | 467 | 0 | 0 | 16,953 | 0 | 0 | 0 | 34,523 |
| Jul 22 | 3,030 | 17,258 | 5,397 | 0 | 0 | 10,666 | 0 | 0 | 0 | 36,351 |
| Jul 23 | 1,475 | 17,058 | 3,095 | 0 | 0 | 0 | 1,229 | 0 | 0 | 22,857 |
| Jul 24 | 2,148 | 13,258 | 3,166 | 1,258 | 811 | 0 | 2,521 | 356 | 0 | 23,518 |
| Jul 25 | 766 | 17,069 | 6,316 | 1,964 | 1,920 | 0 | 3,368 | 4,460 | 48 | 35,911 |
| Jul 26 | 1,765 | 14,856 | 5,822 | 1,179 | 5 | 0 | 2,796 | 15,726 | 416 | 42,565 |
| Jul 27 | 80 | 0 | 3,971 | 448 | 2,834 | 0 | 0 | 2,500 | 1,288 | 11,121 |
| Jul 28 | 75 | 0 | 0 | 3,382 | 269 | 0 | 0 | 0 | 0 | 3,726 |
| Jul 29 | 312 | 0 | 0 | 0 | 299 | 0 | 0 | 0 | 15,029 | 15,640 |
| Jul 30 | 4,597 | 0 | 0 | 0 | 0 | 0 | 83 | 0 | 0 | 4,680 |
| Jul 31 | 3,704 | 0 | 0 | 0 | 0 | 0 | 1,565 | 0 | 11,686 | 16,955 |
| Aug 1 | 10,535 | 0 | 0 | 0 | 289 | 1,822 | 3,591 | 3,241 | 13,467 | 32,945 |
| Aug 2 | 6,097 | 8,197 | 0 | 0 | 509 | 2,742 | 4,409 | 2,861 | 9,458 | 34,273 |
| Aug 3 | 2,472 | 9,224 | 525 | 0 | 94 | 1,317 | 0 | 3,508 | 0 | 17,140 |
| Aug 4 | 1,519 | 7,411 | 1,763 | 76 | 0 | 4,255 | 0 | 0 | 0 | 15,024 |
| Aug 5 | 1,348 | 5,817 | 2,242 | 1,461 | 0 | 706 | 0 | 0 | 0 | 11,574 |
| Aug 6 | 3,735 | 0 | 1,446 | 991 | 0 | 3,321 | 0 | 0 | 8,401 | 17,894 |
| Aug 7 | 7,759 | 0 | 0 | 899 | 62 | 1,701 | 0 | 0 | 8,418 | 18,839 |
| Aug 8 | 8,563 | 0 | 0 | 0 | 0 | 920 | 0 | 0 | 7,735 | 17,218 |
| Aug 9 | 7,259 | 0 | 0 | 0 | 0 | 724 | 0 | 0 | 0 | 7,983 |
| Aug 10 | 3,903 | 1,420 | 0 | 0 | 0 | 1,342 | 0 | 0 | 0 | 6,665 |
| Aug 11 | 1,288 | 7,579 | 0 | 0 | 0 | 654 | 0 | 0 | 3,677 | 13,198 |
| Aug 12 | 1,225 | 6,824 | 0 | 0 | 0 | 621 | 308 | 0 | 6,972 | 15,950 |
| Aug 13 | 2,205 | 5,256 | 51 | 0 | 2 | 327 | 2,443 | 376 | 4,445 | 15,105 |
| Aug 14 | 7,153 | 0 | 0 | 0 | 1 | 898 | 1,768 | 2,188 | 0 | 12,008 |
| Aug 15 | 6,857 | 0 | 0 | 0 | 0 | 480 | 704 | 2,094 | 0 | 10,135 |
| Aug 16 | 665 | 5,908 | 0 | 0 | 0 | 3,642 | 0 | 1,435 | 2,848 | 14,498 |
| Aug 17 | 0 | 6,621 | 0 | 0 | 0 | 2,885 | 0 | 0 | 2,785 | 12,291 |
| Aug 18 | 1,058 | 4,663 | 0 | 0 | 0 | 954 | 1,303 | 0 | 600 | 8,578 |
| Aug 19 | 3,477 | 2,314 | 0 | 0 | 0 | 0 | 1,051 | 1,279 | 0 | 8,121 |
| Aug 20 | 5,552 | 0 | 0 | 0 | 0 | 336 | 0 | 1,253 | 0 | 7,141 |
| Aug 21 | 5,322 | 0 | 0 | 0 | 0 | 202 | 370 | 928 | 871 | 7,693 |

-Continued-

Table 21. (page 3 of 3)

| Date | Escapement | Chignik Lagoon | Hook Bay /Kujulik | Aniakchak | Eastern District | Cape Igvak | Western District | Perryville District | Southeast Mainland | Daily Total |
|--------|------------|----------------|-------------------|-----------|------------------|------------|------------------|---------------------|--------------------|-------------|
| Aug 22 | 149 | 0 | 0 | 0 | 0 | 0 | 0 | 319 | 1,059 | 1,527 |
| Aug 23 | 0 | 7,450 | 0 | 0 | 0 | 0 | 0 | 0 | 1,203 | 8,653 |
| Aug 24 | 0 | 6,050 | 0 | 0 | 0 | 0 | 0 | 0 | 708 | 6,758 |
| Aug 25 | 0 | 5,528 | 0 | 0 | 0 | 0 | 0 | 0 | 235 | 5,763 |
| Aug 26 | 0 | 4,437 | 0 | 0 | 0 | 0 | 523 | 0 | 19 | 4,979 |
| Aug 27 | 4,003 | 0 | 0 | 0 | 0 | 0 | 199 | 1,490 | 0 | 5,692 |
| Aug 28 | 3,960 | 0 | 0 | 0 | 0 | 0 | 633 | 726 | 114 | 5,433 |
| Aug 29 | 641 | 0 | 0 | 0 | 70 | 0 | 0 | 875 | 45 | 1,631 |
| Aug 30 | 0 | 4,922 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 5,043 |
| Aug 31 | 0 | 5,361 | 214 | 0 | 0 | 0 | 0 | 0 | 330 | 5,905 |
| Sep 1 | 1,744 | 0 | 202 | 0 | 0 | 0 | 156 | 0 | 0 | 2,102 |
| Sep 2 | 0 | 6,457 | 0 | 0 | 0 | 0 | 24 | 34 | 0 | 6,515 |
| Sep 3 | 1,422 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,422 |
| Sep 4 | 2,379 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,379 |
| Sep 5 | 0 | 3,391 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,391 |
| Sep 6 | 0 | 1,207 | 0 | 0 | 0 | 0 | 0 | 0 | 620 | 1,827 |
| Sep 7 | 0 | 1,462 | 0 | 0 | 0 | 0 | 0 | 0 | 2,854 | 4,316 |
| Sep 8 | 1,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,582 | 4,082 |
| Sep 9 | 1,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,500 |
| Sep 10 | 1,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,500 |
| Sep 11 | 1,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 235 | 1,735 |
| Sep 12 | 1,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 959 | 2,459 |
| Sep 13 | 0 | 1,665 | 0 | 0 | 0 | 0 | 0 | 0 | 176 | 1,841 |
| Sep 14 | 0 | 1,458 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 1,472 |
| Sep 15 | 0 | 1,128 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,128 |
| Sep 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 147 | 147 |
| Sep 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 276 | 276 |
| Sep 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 383 | 383 |
| Sep 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 |
| Sep 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 103 | 103 |
| Sep 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 215 | 215 |
| Oct 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 42 |
| Oct 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 130 | 130 |
| Oct 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 32 |
| Oct 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 24 |
| Total | 697,377 | 762,730 | 424,666 | 130,446 | 188,272 | 329,905 | 54,051 | 137,186 | 222,591 | 2,947,224 |

Table 22. Daily and cumulative sockeye salmon catch and escapement, as determined by scale pattern analysis for the Black Lake stock, 1993.^a

| Date | Escapement Counts | Catch | Daily Total | Cumulative Catch and Escapement | Cumulative Percent |
|--------|----------------------|--------|----------------|---------------------------------------|-----------------------|
| May 27 | 100 | 0 | 100 | 100 | 0.0 |
| May 28 | 122 | 0 | 122 | 222 | 0.0 |
| May 29 | 254 | 0 | 254 | 476 | 0.0 |
| May 30 | 178 | 0 | 178 | 654 | 0.0 |
| May 31 | 271 | 0 | 271 | 925 | 0.0 |
| Jun 1 | 147 | 0 | 147 | 1,072 | 0.0 |
| Jun 2 | 626 | 0 | 626 | 1,698 | 0.1 |
| Jun 3 | 1,241 | 0 | 1,241 | 2,939 | 0.2 |
| Jun 4 | 1,955 | 0 | 1,955 | 4,894 | 0.4 |
| Jun 5 | 4,896 | 0 | 4,896 | 9,790 | 0.8 |
| Jun 6 | 6,444 | 0 | 6,444 | 16,234 | 1.3 |
| Jun 7 | 12,141 | 0 | 12,141 | 28,375 | 2.2 |
| Jun 8 | 8,570 | 0 | 8,570 | 36,945 | 2.9 |
| Jun 9 | 14,043 | 570 | 14,613 | 51,558 | 4.0 |
| Jun 10 | 12,292 | 764 | 13,056 | 64,614 | 5.0 |
| Jun 11 | 18,409 | 0 | 18,409 | 83,023 | 6.4 |
| Jun 12 | 17,275 | 1,295 | 18,570 | 101,593 | 7.9 |
| Jun 13 | 17,463 | 0 | 17,463 | 119,056 | 9.2 |
| Jun 14 | 23,714 | 0 | 23,714 | 142,770 | 11.1 |
| Jun 15 | 22,280 | 1,523 | 23,803 | 166,573 | 12.9 |
| Jun 16 | 17,717 | 0 | 17,717 | 184,290 | 14.3 |
| Jun 17 | 22,644 | 12,507 | 35,151 | 219,441 | 17.0 |
| Jun 18 | 40,744 | 19,929 | 60,673 | 280,114 | 21.7 |
| Jun 19 | 19,054 | 32,387 | 51,441 | 331,555 | 25.7 |
| Jun 20 | 4,175 | 54,494 | 58,669 | 390,224 | 30.2 |
| Jun 21 | 1,836 | 53,412 | 55,248 | 445,472 | 34.5 |
| Jun 22 | 1,191 | 30,779 | 31,970 | 477,442 | 37.0 |
| Jun 23 | 2,397 | 43,178 | 45,575 | 523,017 | 40.5 |
| Jun 24 | 2,837 | 34,243 | 37,080 | 560,097 | 43.4 |
| Jun 25 | 1,275 | 64,516 | 65,791 | 625,888 | 48.5 |
| Jun 26 | 2,282 | 42,825 | 45,107 | 670,995 | 52.0 |
| Jun 27 | 2,508 | 55,165 | 57,673 | 728,668 | 56.4 |
| Jun 28 | 4,700 | 43,099 | 47,799 | 776,467 | 60.1 |
| Jun 29 | 12,340 | 23,907 | 36,247 | 812,714 | 62.9 |
| Jun 30 | 3,403 | 23,769 | 27,172 | 839,886 | 65.1 |
| Jul 1 | 2,898 | 47,325 | 50,223 | 890,109 | 68.9 |
| Jul 2 | 1,709 | 59,536 | 61,245 | 951,354 | 73.7 |
| Jul 3 | 1,101 | 30,707 | 31,808 | 983,162 | 76.1 |
| Jul 4 | 2,174 | 20,813 | 22,987 | 1,006,149 | 77.9 |
| Jul 5 | 13,290 | 17,221 | 30,511 | 1,036,660 | 80.3 |
| Jul 6 | 15,884 | 3,421 | 19,305 | 1,055,965 | 81.8 |
| Jul 7 | 7,514 | 11,904 | 19,418 | 1,075,383 | 83.3 |
| Jul 8 | 1,105 | 17,698 | 18,803 | 1,094,186 | 84.7 |
| Jul 9 | 770 | 12,008 | 12,778 | 1,106,964 | 85.7 |
| Jul 10 | 736 | 16,059 | 16,795 | 1,123,759 | 87.0 |
| Jul 11 | 518 | 20,381 | 20,899 | 1,144,658 | 88.7 |
| Jul 12 | 440 | 21,225 | 21,665 | 1,166,323 | 90.3 |

-Continued-

Table 22. (page 2 of 2)

| Date | Escapement Counts | Catch | Daily Total | Cumulative Catch and Escapement | Cumulative Percent |
|--------|----------------------|--------|----------------|---------------------------------------|-----------------------|
| Jul 13 | 224 | 14,723 | 14,947 | 1,181,270 | 91.5 |
| Jul 14 | 205 | 20,646 | 20,851 | 1,202,121 | 93.1 |
| Jul 15 | 386 | 13,835 | 14,221 | 1,216,342 | 94.2 |
| Jul 16 | 296 | 12,741 | 13,037 | 1,229,379 | 95.2 |
| Jul 17 | 1,058 | 8,189 | 9,247 | 1,238,626 | 95.9 |
| Jul 18 | 2,650 | 3,203 | 5,853 | 1,244,479 | 96.4 |
| Jul 19 | 3,287 | 10,739 | 14,026 | 1,258,505 | 97.5 |
| Jul 20 | 4,470 | 4,550 | 9,020 | 1,267,525 | 98.2 |
| Jul 21 | 899 | 4,408 | 5,307 | 1,272,832 | 98.6 |
| Jul 22 | 417 | 4,585 | 5,002 | 1,277,834 | 99.0 |
| Jul 23 | 180 | 2,605 | 2,785 | 1,280,619 | 99.2 |
| Jul 24 | 230 | 2,285 | 2,515 | 1,283,134 | 99.4 |
| Jul 25 | 70 | 3,232 | 3,302 | 1,286,436 | 99.6 |
| Jul 26 | 135 | 3,136 | 3,271 | 1,289,707 | 99.9 |
| Jul 27 | 5 | 681 | 686 | 1,290,393 | 99.9 |
| Jul 28 | 4 | 169 | 173 | 1,290,566 | 100.0 |
| Jul 29 | 10 | 475 | 485 | 1,291,051 | 100.0 |
| Jul 30 | 72 | 1 | 73 | 1,291,124 | 100.0 |

^a Catch and escapement is adjusted to Chignik Lagoon date.

Table 23. Chignik Lake sockeye salmon stock estimates for daily and cumulative catch and escapement, based on scale pattern analysis that is adjusted to the Chignik Lagoon date, 1993.^a

| Date | Escapement Counts | Catch | Daily Total | Cumulative Catch and Escapement | Cumulative Percent |
|--------|----------------------|--------|----------------|---------------------------------------|-----------------------|
| May 27 | 4 | 0 | 4 | 4 | 0.0 |
| May 28 | 7 | 0 | 7 | 11 | 0.0 |
| May 29 | 17 | 0 | 17 | 28 | 0.0 |
| May 30 | 14 | 0 | 14 | 42 | 0.0 |
| May 31 | 25 | 0 | 25 | 67 | 0.0 |
| Jun 1 | 16 | 0 | 16 | 83 | 0.0 |
| Jun 2 | 74 | 0 | 74 | 157 | 0.0 |
| Jun 3 | 164 | 0 | 164 | 321 | 0.0 |
| Jun 4 | 285 | 0 | 285 | 606 | 0.0 |
| Jun 5 | 783 | 0 | 783 | 1,389 | 0.0 |
| Jun 6 | 1,124 | 0 | 1,124 | 2,513 | 0.2 |
| Jun 7 | 2,296 | 0 | 2,296 | 4,809 | 0.3 |
| Jun 8 | 1,751 | 0 | 1,751 | 6,560 | 0.4 |
| Jun 9 | 3,088 | 125 | 3,213 | 9,773 | 0.6 |
| Jun 10 | 2,953 | 183 | 3,136 | 12,909 | 0.8 |
| Jun 11 | 4,803 | 0 | 4,803 | 17,712 | 1.1 |
| Jun 12 | 4,875 | 365 | 5,240 | 22,952 | 1.4 |
| Jun 13 | 5,313 | 0 | 5,313 | 28,265 | 1.7 |
| Jun 14 | 7,765 | 0 | 7,765 | 36,030 | 2.2 |
| Jun 15 | 7,838 | 536 | 8,374 | 44,404 | 2.7 |
| Jun 16 | 6,024 | 0 | 6,024 | 50,428 | 3.0 |
| Jun 17 | 7,444 | 4,112 | 11,556 | 61,984 | 3.7 |
| Jun 18 | 12,955 | 6,337 | 19,292 | 81,276 | 4.9 |
| Jun 19 | 5,863 | 9,963 | 15,826 | 97,102 | 5.9 |
| Jun 20 | 1,243 | 16,227 | 17,470 | 114,572 | 6.9 |
| Jun 21 | 529 | 15,400 | 15,929 | 130,501 | 7.9 |
| Jun 22 | 363 | 9,355 | 9,718 | 140,219 | 8.5 |
| Jun 23 | 769 | 13,836 | 14,605 | 154,824 | 9.3 |
| Jun 24 | 958 | 11,569 | 12,527 | 167,351 | 10.1 |
| Jun 25 | 453 | 22,981 | 23,434 | 190,785 | 11.5 |
| Jun 26 | 944 | 17,730 | 18,674 | 209,459 | 12.6 |
| Jun 27 | 1,213 | 26,685 | 27,898 | 237,357 | 14.3 |
| Jun 28 | 2,375 | 21,775 | 24,150 | 261,507 | 15.8 |
| Jun 29 | 6,537 | 12,666 | 19,203 | 280,710 | 17.0 |
| Jun 30 | 1,898 | 13,254 | 15,152 | 295,862 | 17.9 |
| Jul 1 | 1,708 | 27,879 | 29,587 | 325,449 | 19.7 |
| Jul 2 | 1,261 | 43,934 | 45,195 | 370,644 | 22.4 |
| Jul 3 | 1,018 | 28,348 | 29,366 | 400,010 | 24.2 |
| Jul 4 | 2,037 | 19,498 | 21,535 | 421,545 | 25.5 |
| Jul 5 | 13,715 | 17,769 | 31,484 | 453,029 | 27.4 |
| Jul 6 | 18,480 | 3,981 | 22,461 | 475,490 | 28.7 |
| Jul 7 | 10,104 | 16,009 | 26,113 | 501,603 | 30.3 |
| Jul 8 | 1,733 | 27,757 | 29,490 | 531,093 | 32.1 |
| Jul 9 | 1,424 | 22,201 | 23,625 | 554,718 | 33.5 |
| Jul 10 | 1,626 | 35,501 | 37,127 | 591,845 | 35.7 |
| Jul 11 | 1,215 | 47,789 | 49,004 | 640,849 | 38.7 |
| Jul 12 | 1,093 | 52,824 | 53,917 | 694,766 | 42.0 |
| Jul 13 | 591 | 38,922 | 39,513 | 734,279 | 44.3 |
| Jul 14 | 575 | 58,029 | 58,604 | 792,883 | 47.9 |
| Jul 15 | 1,155 | 41,381 | 42,536 | 835,419 | 50.4 |
| Jul 16 | 944 | 40,604 | 41,548 | 876,967 | 53.0 |
| Jul 17 | 3,710 | 28,716 | 32,426 | 909,393 | 54.9 |
| Jul 18 | 10,320 | 12,475 | 22,795 | 932,188 | 56.3 |
| Jul 19 | 14,284 | 46,665 | 60,949 | 993,137 | 60.0 |

-Continued-

Table 23. (page 2 of 3)

| Date | Escapement Counts | Catch | Daily Total | Cumulative Catch and Escapement | Cumulative Percent |
|--------|----------------------|--------|----------------|---------------------------------------|-----------------------|
| Jul 20 | 21,791 | 22,180 | 43,971 | 1,037,108 | 62.6 |
| Jul 21 | 4,950 | 24,266 | 29,216 | 1,066,324 | 64.4 |
| Jul 21 | 4,950 | 24,266 | 29,216 | 1,066,324 | 64.4 |
| Jul 22 | 2,613 | 28,736 | 31,349 | 1,097,673 | 66.3 |
| Jul 23 | 1,295 | 18,777 | 20,072 | 1,117,745 | 67.5 |
| Jul 24 | 1,918 | 19,085 | 21,003 | 1,138,748 | 68.8 |
| Jul 25 | 696 | 31,913 | 32,609 | 1,171,357 | 70.7 |
| Jul 26 | 1,630 | 37,664 | 39,294 | 1,210,651 | 73.1 |
| Jul 27 | 75 | 10,360 | 10,435 | 1,221,086 | 73.7 |
| Jul 28 | 71 | 3,482 | 3,553 | 1,224,639 | 73.9 |
| Jul 29 | 302 | 14,853 | 15,155 | 1,239,794 | 74.9 |
| Jul 30 | 4,525 | 82 | 4,607 | 1,244,401 | 75.1 |
| Jul 31 | 3,704 | 13,251 | 16,955 | 1,261,356 | 76.2 |
| Aug 1 | 10,535 | 22,410 | 32,945 | 1,294,301 | 78.2 |
| Aug 2 | 6,097 | 28,176 | 34,273 | 1,328,574 | 80.2 |
| Aug 3 | 2,472 | 14,668 | 17,140 | 1,345,714 | 81.3 |
| Aug 4 | 1,519 | 13,505 | 15,024 | 1,360,738 | 82.2 |
| Aug 5 | 1,348 | 10,226 | 11,574 | 1,372,312 | 82.9 |
| Aug 6 | 3,735 | 14,159 | 17,894 | 1,390,206 | 83.9 |
| Aug 7 | 7,759 | 11,080 | 18,839 | 1,409,045 | 85.1 |
| Aug 8 | 8,563 | 8,655 | 17,218 | 1,426,263 | 86.1 |
| Aug 9 | 7,259 | 724 | 7,983 | 1,434,246 | 86.6 |
| Aug 10 | 3,903 | 2,762 | 6,665 | 1,440,911 | 87.0 |
| Aug 11 | 1,288 | 11,910 | 13,198 | 1,454,109 | 87.8 |
| Aug 12 | 1,225 | 14,725 | 15,950 | 1,470,059 | 88.8 |
| Aug 13 | 2,205 | 12,900 | 15,105 | 1,485,164 | 89.7 |
| Aug 14 | 7,153 | 4,855 | 12,008 | 1,497,172 | 90.4 |
| Aug 15 | 6,857 | 3,278 | 10,135 | 1,507,307 | 91.0 |
| Aug 16 | 665 | 13,833 | 14,498 | 1,521,805 | 91.9 |
| Aug 17 | 0 | 12,291 | 12,291 | 1,534,096 | 92.6 |
| Aug 18 | 1,058 | 7,520 | 8,578 | 1,542,674 | 93.2 |
| Aug 19 | 3,477 | 4,644 | 8,121 | 1,550,795 | 93.6 |
| Aug 20 | 5,552 | 1,589 | 7,141 | 1,557,936 | 94.1 |
| Aug 21 | 5,322 | 2,371 | 7,693 | 1,565,629 | 94.5 |
| Aug 22 | 149 | 1,378 | 1,527 | 1,567,156 | 94.6 |
| Aug 23 | 0 | 8,653 | 8,653 | 1,575,809 | 95.2 |
| Aug 24 | 0 | 6,758 | 6,758 | 1,582,567 | 95.6 |
| Aug 25 | 0 | 5,763 | 5,763 | 1,588,330 | 95.9 |
| Aug 26 | 0 | 4,979 | 4,979 | 1,593,309 | 96.2 |
| Aug 27 | 4,003 | 1,689 | 5,692 | 1,599,001 | 96.6 |
| Aug 28 | 3,960 | 1,473 | 5,433 | 1,604,434 | 96.9 |
| Aug 29 | 641 | 990 | 1,631 | 1,606,065 | 97.0 |
| Aug 30 | 0 | 5,043 | 5,043 | 1,611,108 | 97.3 |
| Aug 31 | 0 | 5,905 | 5,905 | 1,617,013 | 97.6 |
| Sep 1 | 1,744 | 358 | 2,102 | 1,619,115 | 97.8 |
| Sep 2 | 0 | 6,515 | 6,515 | 1,625,630 | 98.2 |
| Sep 3 | 1,422 | 0 | 1,422 | 1,627,052 | 98.2 |
| Sep 4 | 2,379 | 0 | 2,379 | 1,629,431 | 98.4 |
| Sep 5 | 0 | 3,391 | 3,391 | 1,632,822 | 98.6 |
| Sep 6 | 0 | 1,827 | 1,827 | 1,634,649 | 98.7 |
| Sep 7 | 0 | 4,316 | 4,316 | 1,638,965 | 99.0 |
| Sep 8 | 1,500 | 2,582 | 4,082 | 1,643,047 | 99.2 |
| Sep 9 | 1,500 | 0 | 1,500 | 1,644,547 | 99.3 |
| Sep 10 | 1,500 | 0 | 1,500 | 1,646,047 | 99.4 |
| Sep 11 | 1,500 | 235 | 1,735 | 1,647,782 | 99.5 |
| Sep 12 | 1,500 | 959 | 2,459 | 1,650,241 | 99.6 |
| Sep 13 | 0 | 1,841 | 1,841 | 1,652,082 | 99.8 |
| Sep 14 | 0 | 1,472 | 1,472 | 1,653,554 | 99.8 |

-Continued-

Table 23. (page 3 of 3)

| Date | Escapement Counts | Catch | Daily Total | Cumulative Catch and Escapement | Cumulative Percent |
|--------|----------------------|-------|----------------|---------------------------------------|-----------------------|
| Sep 15 | 0 | 1,128 | 1,128 | 1,654,682 | 99.9 |
| Sep 18 | 0 | 147 | 147 | 1,654,829 | 99.9 |
| Sep 19 | 0 | 276 | 276 | 1,655,105 | 99.9 |
| Sep 20 | 0 | 383 | 383 | 1,655,488 | 100.0 |
| Sep 21 | 0 | 66 | 66 | 1,655,554 | 100.0 |
| Sep 22 | 0 | 103 | 103 | 1,655,657 | 100.0 |
| Sep 29 | 0 | 215 | 215 | 1,655,872 | 100.0 |
| Oct 4 | 0 | 42 | 42 | 1,655,914 | 100.0 |
| Oct 5 | 0 | 130 | 130 | 1,656,044 | 100.0 |
| Oct 6 | 0 | 32 | 32 | 1,656,076 | 100.0 |
| Oct 11 | 0 | 24 | 24 | 1,656,100 | 100.0 |

^a Catch and escapement is adjusted to Chignik Lagoon date.

Table 24. Black Lake weekly estimated sockeye salmon escapement by age class, 1993.

| Statistical Week | Age Class | | | | | | | | | | | | | Total |
|---------------------|-----------|-----|-------|--------|-----|---------|--------|-------|---------|-----|-------|-----|-------|---------|
| | 0.2 | 1.1 | 0.3 | 1.2 | 2.1 | 1.3 | 2.2 | 1.4 | 2.3 | 3.2 | 2.4 | 3.3 | Other | |
| 22 Number | 0 | 0 | 0 | 50 | 0 | 409 | 33 | 4 | 154 | 1 | 3 | 0 | 0 | 654 |
| Percent | 0.0 | 0.0 | 0.0 | 7.6 | 0.0 | 62.5 | 5.0 | 0.6 | 23.5 | 0.2 | 0.5 | 0.0 | 0.0 | |
| 23 Number | 0 | 0 | 0 | 1,180 | 0 | 9,770 | 787 | 91 | 3,661 | 30 | 61 | 0 | 0 | 15,580 |
| Percent | 0.0 | 0.0 | 0.0 | 7.6 | 0.0 | 62.7 | 5.1 | 0.6 | 23.5 | 0.2 | 0.4 | 0.0 | 0.0 | |
| 24 Number | 11 | 0 | 23 | 7,768 | 11 | 61,997 | 4,579 | 873 | 24,429 | 118 | 288 | 98 | 0 | 100,195 |
| Percent | 0.0 | 0.0 | 0.0 | 7.8 | 0.0 | 61.9 | 4.6 | 0.9 | 24.4 | 0.1 | 0.3 | 0.1 | 0.0 | |
| 25 Number | 187 | 0 | 644 | 24,621 | 367 | 77,873 | 11,646 | 1,484 | 32,548 | 465 | 292 | 202 | 0 | 150,329 |
| Percent | 0.1 | 0.0 | 0.4 | 16.4 | 0.2 | 51.8 | 7.7 | 1.0 | 21.7 | 0.3 | 0.2 | 0.1 | 0.0 | |
| 26 Number | 23 | 7 | 58 | 3,159 | 36 | 6,476 | 1,640 | 128 | 2,723 | 22 | 40 | 7 | 7 | 14,326 |
| Percent | 0.2 | 0.0 | 0.4 | 22.1 | 0.3 | 45.2 | 11.4 | 0.9 | 19.0 | 0.2 | 0.3 | 0.0 | 0.0 | |
| 27 Number | 7 | 47 | 162 | 5,616 | 82 | 9,976 | 3,013 | 216 | 8,947 | 73 | 149 | 19 | 19 | 28,326 |
| Percent | 0.0 | 0.2 | 0.6 | 19.8 | 0.3 | 35.2 | 10.6 | 0.8 | 31.6 | 0.3 | 0.5 | 0.1 | 0.1 | |
| 28 Number | 27 | 0 | 97 | 5,568 | 118 | 7,888 | 4,504 | 118 | 21,139 | 28 | 326 | 4 | 0 | 39,817 |
| Percent | 0.1 | 0.0 | 0.2 | 14.0 | 0.3 | 19.8 | 11.3 | 0.3 | 53.1 | 0.1 | 0.8 | 0.0 | 0.0 | |
| 29 Number | 0 | 0 | 35 | 298 | 0 | 690 | 265 | 12 | 3,865 | 36 | 38 | 19 | 0 | 5,258 |
| Percent | 0.0 | 0.0 | 0.7 | 5.7 | 0.0 | 13.1 | 5.0 | 0.2 | 73.5 | 0.7 | 0.7 | 0.4 | 0.0 | |
| 30 Number | 0 | 0 | 71 | 460 | 0 | 1,194 | 356 | 40 | 7,299 | 51 | 61 | 21 | 0 | 9,553 |
| Percent | 0.0 | 0.0 | 0.7 | 4.8 | 0.0 | 12.5 | 3.7 | 0.4 | 76.4 | 0.5 | 0.6 | 0.2 | 0.0 | |
| 31 Number | 0 | 0 | 2 | 19 | 1 | 19 | 9 | 1 | 170 | 2 | 2 | 0 | 0 | 225 |
| Percent | 0.0 | 0.0 | 0.9 | 8.4 | 0.4 | 8.4 | 4.0 | 0.4 | 75.6 | 0.9 | 0.9 | 0.0 | 0.0 | |
| Total | 255 | 54 | 1,092 | 48,739 | 615 | 176,292 | 26,832 | 2,967 | 104,935 | 826 | 1,260 | 370 | 26 | 364,263 |
| Percent | 0.1 | 0.0 | 0.3 | 13.4 | 0.2 | 48.4 | 7.4 | 0.8 | 28.8 | 0.2 | 0.3 | 0.1 | 0.0 | |

Table 25. Black Lake weekly estimated sockeye salmon catch by age class, 1993.

| Statistical Week | Age Class | | | | | | | | | | | | | Total |
|------------------|-----------|-----|-------|---------|-------|---------|--------|-------|---------|-------|-------|-----|-------|---------|
| | 0.2 | 1.1 | 0.3 | 1.2 | 2.1 | 1.3 | 2.2 | 1.4 | 2.3 | 3.2 | 2.4 | 3.3 | Other | |
| 24 Number | 0 | 0 | 0 | 194 | 0 | 1,632 | 117 | 24 | 650 | 2 | 7 | 3 | 0 | 2,629 |
| Percent | 0.0 | 0.0 | 0.0 | 7.4 | 0.0 | 62.1 | 4.5 | 0.9 | 24.7 | 0.1 | 0.3 | 0.1 | 0.0 | |
| 25 Number | 78 | 0 | 621 | 25,046 | 388 | 55,290 | 13,408 | 933 | 24,454 | 311 | 233 | 78 | 0 | 120,840 |
| Percent | 0.1 | 0.0 | 0.5 | 20.7 | 0.3 | 45.8 | 11.1 | 0.8 | 20.2 | 0.3 | 0.2 | 0.1 | 0.0 | |
| 26 Number | 530 | 139 | 1,294 | 71,503 | 811 | 146,697 | 37,173 | 2,897 | 61,427 | 482 | 887 | 139 | 139 | 324,118 |
| Percent | 0.2 | 0.0 | 0.4 | 22.1 | 0.3 | 45.3 | 11.5 | 0.9 | 19.0 | 0.1 | 0.3 | 0.0 | 0.0 | |
| 27 Number | 117 | 364 | 1,443 | 49,251 | 753 | 80,043 | 27,498 | 1,664 | 86,059 | 573 | 1,209 | 91 | 91 | 249,156 |
| Percent | 0.0 | 0.1 | 0.6 | 19.8 | 0.3 | 32.1 | 11.0 | 0.7 | 34.5 | 0.2 | 0.5 | 0.0 | 0.0 | |
| 28 Number | 24 | 0 | 447 | 10,470 | 162 | 15,529 | 10,095 | 168 | 60,569 | 49 | 1,078 | 101 | 0 | 98,692 |
| Percent | 0.0 | 0.0 | 0.5 | 10.6 | 0.2 | 15.7 | 10.2 | 0.2 | 61.4 | 0.0 | 1.1 | 0.1 | 0.0 | |
| 29 Number | 0 | 0 | 649 | 6,301 | 0 | 12,164 | 6,247 | 123 | 67,427 | 478 | 863 | 310 | 0 | 94,562 |
| Percent | 0.0 | 0.0 | 0.7 | 6.7 | 0.0 | 12.9 | 6.6 | 0.1 | 71.3 | 0.5 | 0.9 | 0.3 | 0.0 | |
| 30 Number | 0 | 0 | 249 | 1,582 | 7 | 3,912 | 1,154 | 150 | 24,931 | 154 | 213 | 52 | 0 | 32,404 |
| Percent | 0.0 | 0.0 | 0.8 | 4.9 | 0.0 | 12.1 | 3.6 | 0.5 | 76.9 | 0.5 | 0.7 | 0.2 | 0.0 | |
| 31 Number | 0 | 0 | 37 | 343 | 13 | 408 | 166 | 18 | 3,404 | 29 | 41 | 3 | 0 | 4,462 |
| Percent | 0.0 | 0.0 | 0.8 | 7.7 | 0.3 | 9.1 | 3.7 | 0.4 | 76.3 | 0.6 | 0.9 | 0.1 | 0.0 | |
| Total | 749 | 503 | 4,740 | 164,690 | 2,134 | 315,675 | 95,858 | 5,977 | 328,921 | 2,078 | 4,531 | 777 | 230 | 926,863 |
| Percent | 0.1 | 0.1 | 0.5 | 17.8 | 0.2 | 34.1 | 10.3 | 0.6 | 35.5 | 0.2 | 0.5 | 0.1 | 0.0 | |

Table 26. Chignik Lake weekly estimated sockeye salmon escapement by age class, 1993.

| Statistical Week | Age Class | | | | | | | | | | | | | Total |
|---------------------|-----------|-----|-----|-------|-----|--------|-------|-----|--------|-----|-----|-----|-------|--------|
| | 0.2 | 1.1 | 0.3 | 1.2 | 2.1 | 1.3 | 2.2 | 1.4 | 2.3 | 3.2 | 2.4 | 3.3 | Other | |
| 22 Number | 0 | 0 | 0 | 3 | 0 | 27 | 2 | 0 | 10 | 0 | 0 | 0 | 0 | 42 |
| Percent | 0.0 | 0.0 | 0.0 | 7.1 | 0.0 | 64.3 | 4.8 | 0.0 | 23.8 | 0.0 | 0.0 | 0.0 | 0.0 | |
| 23 Number | 0 | 0 | 0 | 187 | 0 | 1,549 | 125 | 14 | 581 | 5 | 10 | 0 | 0 | 2,471 |
| Percent | 0.0 | 0.0 | 0.0 | 7.6 | 0.0 | 62.7 | 5.1 | 0.6 | 23.5 | 0.2 | 0.4 | 0.0 | 0.0 | |
| 24 Number | 3 | 0 | 7 | 1,958 | 3 | 15,483 | 1,132 | 228 | 6,138 | 28 | 69 | 28 | 0 | 25,077 |
| Percent | 0.0 | 0.0 | 0.0 | 7.8 | 0.0 | 61.7 | 4.5 | 0.9 | 24.5 | 0.1 | 0.3 | 0.1 | 0.0 | |
| 25 Number | 62 | 0 | 210 | 7,993 | 119 | 25,526 | 3,763 | 488 | 10,654 | 153 | 96 | 67 | 0 | 49,131 |
| Percent | 0.1 | 0.0 | 0.4 | 16.3 | 0.2 | 52.0 | 7.7 | 1.0 | 21.7 | 0.3 | 0.2 | 0.1 | 0.0 | |
| 26 Number | 8 | 3 | 21 | 1,145 | 12 | 2,372 | 588 | 47 | 1,002 | 9 | 16 | 3 | 3 | 5,229 |
| Percent | 0.2 | 0.1 | 0.4 | 21.9 | 0.2 | 45.4 | 11.2 | 0.9 | 19.2 | 0.2 | 0.3 | 0.1 | 0.1 | |
| 27 Number | 6 | 26 | 97 | 3,355 | 48 | 5,756 | 1,825 | 121 | 5,452 | 42 | 85 | 10 | 10 | 16,833 |
| Percent | 0.0 | 0.2 | 0.6 | 19.9 | 0.3 | 34.2 | 10.8 | 0.7 | 32.4 | 0.2 | 0.5 | 0.1 | 0.1 | |
| 28 Number | 29 | 0 | 121 | 6,502 | 139 | 9,348 | 5,391 | 140 | 26,171 | 31 | 416 | 9 | 0 | 48,297 |
| Percent | 0.1 | 0.0 | 0.3 | 13.5 | 0.3 | 19.4 | 11.2 | 0.3 | 54.2 | 0.1 | 0.9 | 0.0 | 0.0 | |
| 29 Number | 0 | 0 | 123 | 1,023 | 0 | 2,416 | 895 | 43 | 13,562 | 130 | 130 | 67 | 0 | 18,389 |
| Percent | 0.0 | 0.0 | 0.7 | 5.6 | 0.0 | 13.1 | 4.9 | 0.2 | 73.8 | 0.7 | 0.7 | 0.4 | 0.0 | |
| 30 Number | 0 | 0 | 355 | 2,289 | 3 | 5,906 | 1,755 | 204 | 36,384 | 249 | 305 | 97 | 0 | 47,547 |
| Percent | 0.0 | 0.0 | 0.7 | 4.8 | 0.0 | 12.4 | 3.7 | 0.4 | 76.5 | 0.5 | 0.6 | 0.2 | 0.0 | |
| 31 Number | 0 | 0 | 172 | 2,477 | 135 | 1,294 | 973 | 28 | 15,221 | 245 | 264 | 34 | 0 | 20,843 |
| Percent | 0.0 | 0.0 | 0.8 | 11.9 | 0.6 | 6.2 | 4.7 | 0.1 | 73.0 | 1.2 | 1.3 | 0.2 | 0.0 | |
| 32 Number | 0 | 0 | 233 | 3,640 | 389 | 1,200 | 1,199 | 78 | 23,862 | 348 | 505 | 39 | 0 | 31,493 |
| Percent | 0.0 | 0.0 | 0.7 | 11.6 | 1.2 | 3.8 | 3.8 | 0.2 | 75.8 | 1.1 | 1.6 | 0.1 | 0.0 | |
| 33 Number | 0 | 24 | 124 | 1,725 | 287 | 1,050 | 719 | 76 | 25,421 | 130 | 330 | 4 | 0 | 29,890 |
| Percent | 0.0 | 0.1 | 0.4 | 5.8 | 1.0 | 3.5 | 2.4 | 0.3 | 85.0 | 0.4 | 1.1 | 0.0 | 0.0 | |
| 34 Number | 0 | 3 | 4 | 236 | 24 | 397 | 434 | 3 | 15,068 | 6 | 48 | 0 | 0 | 16,223 |
| Percent | 0.0 | 0.0 | 0.0 | 1.5 | 0.1 | 2.4 | 2.7 | 0.0 | 92.9 | 0.0 | 0.3 | 0.0 | 0.0 | |

-Continued-

Table 26. (page 2 of 2)

| Statistical Week | Age Class | | | | | | | | | | | | | Total |
|---------------------|-----------|-----|-------|--------|-------|--------|--------|-------|---------|-------|-------|-----|-------|---------|
| | 0.2 | 1.1 | 0.3 | 1.2 | 2.1 | 1.3 | 2.2 | 1.4 | 2.3 | 3.2 | 2.4 | 3.3 | Other | |
| 35 Number | 0 | 0 | 0 | 104 | 0 | 207 | 225 | 0 | 8,051 | 0 | 17 | 0 | 0 | 8,604 |
| Percent | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 2.4 | 2.6 | 0.0 | 93.6 | 0.0 | 0.2 | 0.0 | 0.0 | |
| 36 Number | 0 | 0 | 0 | 67 | 0 | 134 | 145 | 0 | 5,188 | 0 | 11 | 0 | 0 | 5,545 |
| Percent | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 2.4 | 2.6 | 0.0 | 93.6 | 0.0 | 0.2 | 0.0 | 0.0 | |
| 37 Number | 0 | 0 | 0 | 90 | 0 | 181 | 196 | 0 | 7,018 | 0 | 15 | 0 | 0 | 7,500 |
| Percent | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 2.4 | 2.6 | 0.0 | 93.6 | 0.0 | 0.2 | 0.0 | 0.0 | |
| Total | 108 | 56 | 1,467 | 32,794 | 1,159 | 72,846 | 19,367 | 1,470 | 199,783 | 1,376 | 2,317 | 358 | 13 | 333,114 |
| Percent | 0.0 | 0.0 | 0.4 | 9.8 | 0.3 | 21.9 | 5.8 | 0.4 | 60.0 | 0.4 | 0.7 | 0.1 | 0.0 | |

Table 27. Chignik Lake weekly estimated sockeye salmon catch by age class, 1993.

| Statistical Week | Age Class | | | | | | | | | | | | | Total |
|---------------------|-----------|-----|-------|--------|-------|--------|--------|-------|---------|-------|-------|-----|-------|---------|
| | 0.2 | 1.1 | 0.3 | 1.2 | 2.1 | 1.3 | 2.2 | 1.4 | 2.3 | 3.2 | 2.4 | 3.3 | Other | |
| 24 Number | 0 | 0 | 0 | 50 | 0 | 417 | 30 | 6 | 167 | 0 | 2 | 1 | 0 | 673 |
| Percent | 0.0 | 0.0 | 0.0 | 7.4 | 0.0 | 62.0 | 4.5 | 0.9 | 24.8 | 0.0 | 0.3 | 0.1 | 0.0 | |
| 25 Number | 25 | 0 | 190 | 7,676 | 119 | 17,051 | 4,101 | 288 | 7,532 | 96 | 72 | 25 | 0 | 37,175 |
| Percent | 0.1 | 0.0 | 0.5 | 20.6 | 0.3 | 45.9 | 11.0 | 0.8 | 20.3 | 0.3 | 0.2 | 0.1 | 0.0 | |
| 26 Number | 187 | 65 | 472 | 25,741 | 281 | 53,383 | 13,230 | 1,070 | 22,457 | 191 | 349 | 65 | 65 | 117,556 |
| Percent | 0.2 | 0.1 | 0.4 | 21.9 | 0.2 | 45.4 | 11.3 | 0.9 | 19.1 | 0.2 | 0.3 | 0.1 | 0.1 | |
| 27 Number | 102 | 222 | 971 | 33,305 | 498 | 51,909 | 18,854 | 1,037 | 59,224 | 371 | 767 | 47 | 47 | 167,354 |
| Percent | 0.1 | 0.1 | 0.6 | 19.9 | 0.3 | 31.0 | 11.3 | 0.6 | 35.4 | 0.2 | 0.5 | 0.0 | 0.0 | |
| 28 Number | 25 | 0 | 874 | 16,802 | 219 | 25,204 | 17,029 | 234 | 108,346 | 84 | 1,972 | 218 | 0 | 171,007 |
| Percent | 0.0 | 0.0 | 0.5 | 9.8 | 0.1 | 14.7 | 10.0 | 0.1 | 63.4 | 0.0 | 1.2 | 0.1 | 0.0 | |
| 29 Number | 0 | 0 | 1,866 | 17,927 | 0 | 35,214 | 17,615 | 373 | 195,162 | 1,444 | 2,438 | 912 | 0 | 272,951 |
| Percent | 0.0 | 0.0 | 0.7 | 6.6 | 0.0 | 12.9 | 6.5 | 0.1 | 71.5 | 0.5 | 0.9 | 0.3 | 0.0 | |
| 30 Number | 0 | 0 | 1,501 | 9,502 | 68 | 22,657 | 6,678 | 928 | 147,893 | 860 | 1,283 | 252 | 0 | 191,622 |
| Percent | 0.0 | 0.0 | 0.8 | 5.0 | 0.0 | 11.8 | 3.5 | 0.5 | 77.2 | 0.4 | 0.7 | 0.1 | 0.0 | |
| 31 Number | 0 | 0 | 849 | 9,867 | 469 | 7,925 | 4,260 | 285 | 76,310 | 915 | 1,105 | 117 | 0 | 102,102 |
| Percent | 0.0 | 0.0 | 0.8 | 9.7 | 0.5 | 7.8 | 4.2 | 0.3 | 74.7 | 0.9 | 1.1 | 0.1 | 0.0 | |
| 32 Number | 0 | 0 | 772 | 12,478 | 1,094 | 4,156 | 4,301 | 161 | 74,572 | 1,230 | 1,552 | 153 | 0 | 100,469 |
| Percent | 0.0 | 0.0 | 0.8 | 12.4 | 1.1 | 4.1 | 4.3 | 0.2 | 74.2 | 1.2 | 1.5 | 0.2 | 0.0 | |
| 33 Number | 0 | 37 | 210 | 2,770 | 451 | 1,825 | 1,064 | 141 | 43,928 | 185 | 542 | 1 | 0 | 51,154 |
| Percent | 0.0 | 0.1 | 0.4 | 5.4 | 0.9 | 3.6 | 2.1 | 0.3 | 85.9 | 0.4 | 1.1 | 0.0 | 0.0 | |
| 34 Number | 0 | 62 | 72 | 1,311 | 415 | 1,230 | 1,310 | 52 | 38,699 | 114 | 361 | 0 | 0 | 43,626 |
| Percent | 0.0 | 0.1 | 0.2 | 3.0 | 1.0 | 2.8 | 3.0 | 0.1 | 88.7 | 0.3 | 0.8 | 0.0 | 0.0 | |
| 35 Number | 0 | 0 | 0 | 365 | 0 | 730 | 791 | 0 | 28,358 | 0 | 61 | 0 | 0 | 30,305 |
| Percent | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 2.4 | 2.6 | 0.0 | 93.6 | 0.0 | 0.2 | 0.0 | 0.0 | |
| 36 Number | 0 | 0 | 0 | 256 | 0 | 511 | 554 | 0 | 19,848 | 0 | 43 | 0 | 0 | 21,212 |
| Percent | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 2.4 | 2.6 | 0.0 | 93.6 | 0.0 | 0.2 | 0.0 | 0.0 | |

-Continued-

Table 27. (page 2 of 2)

| Statistical Week | Age Class | | | | | | | | | | | | | Total |
|---------------------|-----------|-----|-------|---------|-------|---------|--------|-------|---------|-------|--------|-------|-------|-----------|
| | 0.2 | 1.1 | 0.3 | 1.2 | 2.1 | 1.3 | 2.2 | 1.4 | 2.3 | 3.2 | 2.4 | 3.3 | Other | |
| 37 Number | 0 | 0 | 0 | 120 | 0 | 239 | 259 | 0 | 9,281 | 0 | 20 | 0 | 0 | 9,919 |
| Percent | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 2.4 | 2.6 | 0.0 | 93.6 | 0.0 | 0.2 | 0.0 | 0.0 | |
| 38 Number | 0 | 0 | 0 | 59 | 0 | 117 | 127 | 0 | 4,551 | 0 | 10 | 0 | 0 | 4,864 |
| Percent | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 2.4 | 2.6 | 0.0 | 93.6 | 0.0 | 0.2 | 0.0 | 0.0 | |
| 42 Number | 0 | 0 | 0 | 12 | 0 | 24 | 26 | 0 | 931 | 0 | 2 | 0 | 0 | 995 |
| Percent | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 2.4 | 2.6 | 0.0 | 93.6 | 0.0 | 0.2 | 0.0 | 0.0 | |
| Total | 339 | 386 | 7,777 | 138,241 | 3,614 | 222,592 | 90,229 | 4,575 | 837,259 | 5,490 | 10,579 | 1,791 | 112 | 1,322,984 |
| Percent | 0.0 | 0.0 | 0.6 | 10.4 | 0.3 | 16.8 | 6.8 | 0.3 | 63.3 | 0.4 | 0.8 | 0.1 | 0.0 | |

Table 28. Black Lake and Chignik Lake sockeye salmon run estimates by age class for total escapement and catch, based on scale pattern analysis, 1993.

| | Age Class | | | | | | | | | | | | | |
|---------------------|-----------|-----|--------|---------|-------|---------|---------|--------|-----------|-------|--------|-------|-------|-----------|
| | 0.2 | 1.1 | 0.3 | 1.2 | 2.1 | 1.3 | 2.2 | 1.4 | 2.3 | 3.2 | 2.4 | 3.3 | Other | Total |
| <u>Black Lake</u> | | | | | | | | | | | | | | |
| Escapement | 255 | 54 | 1,092 | 48,739 | 615 | 176,292 | 26,832 | 2,967 | 104,935 | 826 | 1,260 | 370 | 26 | 364,263 |
| Catch | 749 | 503 | 4,740 | 164,690 | 2,134 | 315,675 | 95,858 | 5,977 | 328,921 | 2,078 | 4,531 | 777 | 230 | 926,863 |
| Run | 1,004 | 557 | 5,832 | 213,429 | 2,749 | 491,967 | 122,690 | 8,944 | 433,856 | 2,904 | 5,791 | 1,147 | 256 | 1,291,126 |
| Percent | 0.0 | 0.0 | 0.5 | 16.5 | 0.2 | 38.1 | 9.5 | 0.7 | 33.6 | 0.2 | 0.4 | 0.1 | 0.0 | 100.0 |
| <u>Chignik Lake</u> | | | | | | | | | | | | | | |
| Escapement | 108 | 56 | 1,467 | 32,794 | 1,159 | 72,846 | 19,367 | 1,470 | 199,783 | 1,376 | 2,317 | 358 | 13 | 333,114 |
| Catch | 339 | 386 | 7,777 | 138,241 | 3,614 | 222,592 | 90,229 | 4,575 | 837,259 | 5,490 | 10,579 | 1,791 | 112 | 1,322,984 |
| Run | 447 | 442 | 9,244 | 171,035 | 4,773 | 295,438 | 109,596 | 6,045 | 1,037,042 | 6,866 | 12,896 | 2,149 | 125 | 1,656,098 |
| Percent | 0.0 | 0.0 | 0.6 | 10.3 | 0.3 | 17.8 | 6.6 | 0.4 | 62.6 | 0.4 | 0.8 | 0.1 | 0.0 | 100.0 |
| <u>Total Run</u> | | | | | | | | | | | | | | |
| Escapement | 363 | 110 | 2,559 | 81,533 | 1,774 | 249,138 | 46,199 | 4,437 | 304,718 | 2,202 | 3,577 | 728 | 39 | 697,377 |
| Catch | 1,088 | 889 | 12,517 | 302,931 | 5,748 | 538,267 | 186,087 | 10,552 | 1,166,180 | 7,568 | 15,110 | 2,568 | 342 | 2,249,847 |
| Run | 1,451 | 999 | 15,076 | 384,464 | 7,522 | 787,405 | 232,286 | 14,989 | 1,470,898 | 9,770 | 18,687 | 3,296 | 381 | 2,947,224 |
| Percent | 0.0 | 0.0 | 0.5 | 13.0 | 0.3 | 26.7 | 7.9 | 0.5 | 49.9 | 0.3 | 0.6 | 0.1 | 0.0 | 100.0 |

Table 29. Black Lake, Chignik Lake, and combined total run estimates of sockeye salmon defined by catch and escapement, based on scale pattern analysis, 1954-1993.

| Year | Black Lake | | | Chignik Lake | | | Combined | | |
|-----------------|------------|------------|-----------|--------------|------------|-----------|-----------|------------|-----------|
| | Catch | Escapement | Total | Catch | Escapement | Total | Catch | Escapement | Run |
| 1954 | 72,334 | 184,953 | 257,287 | 19,232 | 277,912 | 297,144 | 91,566 | 462,865 | 554,431 |
| 1955 | 179,539 | 256,757 | 436,296 | 168,987 | 201,409 | 370,396 | 348,526 | 458,166 | 806,692 |
| 1956 | 246,442 | 289,096 | 535,538 | 421,251 | 483,024 | 904,275 | 667,693 | 772,120 | 1,439,813 |
| 1957 | 77,423 | 192,479 | 269,902 | 224,757 | 328,779 | 553,536 | 302,180 | 521,258 | 823,438 |
| 1958 | 141,180 | 120,862 | 262,042 | 179,949 | 212,594 | 392,543 | 321,129 | 333,456 | 654,585 |
| 1959 | 165,000 | 112,226 | 277,226 | 251,547 | 308,645 | 560,192 | 416,547 | 420,871 | 837,418 |
| 1960 | 274,048 | 251,567 | 525,615 | 418,356 | 357,230 | 775,586 | 692,404 | 608,797 | 1,301,201 |
| 1961 | 53,852 | 140,714 | 194,566 | 278,609 | 254,970 | 533,579 | 332,461 | 395,684 | 728,145 |
| 1962 | 71,562 | 167,602 | 239,164 | 292,528 | 324,860 | 617,388 | 364,090 | 492,462 | 856,552 |
| 1963 | 80,258 | 332,536 | 412,794 | 323,080 | 200,314 | 523,394 | 403,338 | 532,850 | 936,188 |
| 1964 | 142,380 | 137,073 | 279,453 | 472,510 | 166,625 | 639,135 | 614,890 | 303,698 | 918,588 |
| 1965 | 497,018 | 307,192 | 804,210 | 169,576 | 163,151 | 332,727 | 666,594 | 470,343 | 1,136,937 |
| 1966 | 87,169 | 383,545 | 470,714 | 162,638 | 183,525 | 346,163 | 249,807 | 567,070 | 816,877 |
| 1967 | 154,134 | 328,000 | 482,134 | 350,901 | 189,000 | 539,901 | 505,035 | 517,000 | 1,022,035 |
| 1968 | 542,598 | 342,343 | 884,941 | 641,693 | 244,836 | 886,529 | 1,184,291 | 587,179 | 1,771,470 |
| 1969 | 263,170 | 366,589 | 629,759 | 235,960 | 132,055 | 368,015 | 499,130 | 498,644 | 997,774 |
| 1970 | 1,566,065 | 536,257 | 2,102,322 | 255,338 | 119,952 | 375,290 | 1,821,403 | 656,209 | 2,477,612 |
| 1971 | 555,832 | 671,668 | 1,227,500 | 764,300 | 232,501 | 996,801 | 1,320,132 | 904,169 | 2,224,301 |
| 1972 | 43,220 | 326,320 | 369,540 | 395,461 | 231,270 | 626,731 | 438,681 | 557,590 | 996,271 |
| 1973 | 569,854 | 533,047 | 1,102,901 | 395,862 | 247,144 | 643,006 | 965,716 | 780,191 | 1,745,907 |
| 1974 | 174,883 | 351,701 | 526,584 | 624,568 | 364,612 | 989,180 | 799,451 | 716,313 | 1,515,764 |
| 1975 | 4,019 | 308,914 | 312,933 | 421,414 | 314,084 | 735,498 | 425,433 | 622,998 | 1,048,431 |
| 1976 | 548,107 | 551,254 | 1,099,361 | 778,380 | 341,828 | 1,120,208 | 1,326,487 | 893,082 | 2,219,569 |
| 1977 | 439,693 | 482,247 | 921,940 | 1,696,767 | 463,561 | 2,160,328 | 2,136,460 | 945,808 | 3,082,268 |
| 1978 | 1,070,487 | 458,660 | 1,529,147 | 754,903 | 263,009 | 1,017,912 | 1,825,390 | 721,669 | 2,547,059 |
| 1979 | 207,122 | 385,694 | 592,816 | 944,964 | 317,889 | 1,262,853 | 1,152,086 | 703,583 | 1,855,669 |
| 1980 | 170,629 | 311,332 | 481,961 | 778,014 | 279,729 | 1,057,743 | 948,643 | 591,061 | 1,539,704 |
| 1981 | 779,755 | 438,540 | 1,218,295 | 1,509,574 | 301,092 | 1,810,666 | 2,289,329 | 739,632 | 3,028,961 |
| 1982 | 1,325,041 | 616,117 | 1,941,158 | 450,778 | 305,193 | 755,971 | 1,775,819 | 921,310 | 2,697,129 |
| 1983 | 977,548 | 426,177 | 1,403,725 | 1,467,060 | 441,561 | 1,908,621 | 2,444,608 | 867,738 | 3,312,346 |
| 1984 | 3,245,482 | 597,712 | 3,843,194 | 352,988 | 268,496 | 621,484 | 3,598,470 | 866,208 | 4,464,678 |
| 1985 | 650,340 | 377,516 | 1,027,856 | 490,151 | 369,262 | 859,413 | 1,140,491 | 746,778 | 1,887,269 |
| 1986 | 1,371,935 | 566,088 | 1,938,023 | 609,081 | 207,231 | 816,312 | 1,981,016 | 773,319 | 2,754,335 |
| 1987 | 1,949,867 | 589,291 | 2,539,158 | 481,376 | 214,452 | 695,828 | 2,431,243 | 803,743 | 3,234,986 |
| 1988 | 272,553 | 420,577 | 693,131 | 630,070 | 255,180 | 885,250 | 902,623 | 675,757 | 1,578,380 |
| 1989 | 234,839 | 384,004 | 618,843 | 1,063,015 | 557,171 | 1,620,186 | 1,297,854 | 941,175 | 2,239,029 |
| 1990 | 587,818 | 434,543 | 1,022,361 | 1,855,182 | 335,867 | 2,191,049 | 2,443,000 | 770,410 | 3,213,410 |
| 1991 | 1,714,835 | 657,511 | 2,372,346 | 751,291 | 382,587 | 1,133,878 | 2,466,126 | 1,040,098 | 3,506,224 |
| 1992 | 747,829 | 360,681 | 1,108,510 | 863,650 | 405,922 | 1,269,572 | 1,611,479 | 766,603 | 2,378,082 |
| 1993 | 926,863 | 364,263 | 1,291,126 | 1,322,984 | 333,114 | 1,656,098 | 2,249,847 | 697,377 | 2,947,224 |
| Averages | | | | | | | | | |
| 84-93 | 1,170,236 | 475,219 | 1,645,455 | 842,342 | 332,928 | 1,175,271 | 2,012,579 | 808,147 | 2,820,725 |
| 74-93 | 869,982 | 454,141 | 1,324,123 | 895,111 | 336,092 | 1,231,203 | 1,765,093 | 790,233 | 2,555,326 |
| 64-93 | 727,370 | 433,829 | 1,161,198 | 722,989 | 287,730 | 1,010,719 | 1,450,358 | 721,559 | 2,171,917 |

Table 30. Black Lake and Black River tributaries peak aerial survey escapement estimates for sockeye salmon, 1960-1993.^a

| Year | Black Lake | | | | | | | Black River | | | |
|-------------------|------------|--------|-----------|------------|--------------|--------|---------|-------------|-----------|-----------|--------|
| | Fan | Milk | Boulevard | Alec River | Conglomerate | Broad | Total | Bearskin | West Fork | Chiaktuak | Total |
| 1960 | 38,500 | 8,000 | 40,000 | 30,000 | 3,000 | 30,000 | 149,500 | 11,600 | 23,000 | 19,000 | 53,600 |
| 1961 | 27,000 | 5,000 | 28,700 | 25,000 | 800 | 17,000 | 103,500 | 2,500 | 17,100 | 20,700 | 40,300 |
| 1962 | 18,000 | 7,000 | 13,000 | 60,000 | 200 | 15,000 | 113,200 | 3,000 | 13,000 | 24,000 | 40,000 |
| 1963 | 39,000 | - | 36,000 | 85,000 | 1,000 | 61,000 | 222,000 | 900 | 5,000 | 9,000 | 14,900 |
| 1964 | 19,500 | 3,050 | 23,850 | 17,900 | 9,300 | 9,500 | 83,100 | 500 | 4,500 | 7,000 | 12,000 |
| 1967 | 20,000 | 1,000 | 9,000 | 156,000 | 10,000 | 10,000 | 206,000 | 10,000 | 25,000 | 31,000 | 66,000 |
| 1968 | 32,000 | 2,400 | 20,000 | 60,000 | 2,000 | 4,100 | 120,500 | 1,200 | 10,500 | 10,000 | 21,700 |
| 1969 | 103,000 | 2,100 | 33,000 | 50,000 | 4,000 | 5,000 | 197,100 | 50 | 800 | 1,500 | 2,350 |
| 1970 | 146,000 | 9,000 | 55,500 | 198,000 | 5,000 | - | 413,500 | 450 | 4,000 | 4,000 | 8,450 |
| 1971 | 105,000 | 14,000 | 85,000 | 158,000 | 0 | - | 362,000 | 3,500 | 5,500 | 47,000 | 56,000 |
| 1972 | 18,000 | 3,500 | 19,000 | 74,000 | 400 | - | 114,900 | 1,400 | 4,300 | 23,000 | 28,700 |
| 1973 | 115,000 | 4,000 | 76,000 | 74,000 | 5,000 | - | 274,000 | 13 | 4,100 | 1,500 | 5,613 |
| 1974 | 90,000 | 5,000 | 50,000 | 93,000 | 5,000 | - | 243,000 | 450 | 8,000 | 7,000 | 15,450 |
| 1975 | 40,000 | 4,500 | 25,000 | 87,000 | 0 | - | 156,500 | 65 | 2,500 | 2,500 | 5,065 |
| 1976 | 78,000 | 8,900 | 100,000 | 119,000 | 2,000 | - | 307,900 | 2,650 | 23,700 | 7,700 | 34,050 |
| 1977 | 88,000 | 20,000 | 127,000 | 133,000 | 1,000 | - | 369,000 | 200 | 13,600 | 6,900 | 20,700 |
| 1978 | 114,000 | 3,300 | 74,000 | 83,300 | 500 | - | 275,100 | 410 | 9,600 | 8,500 | 18,510 |
| 1979 | 37,000 | 11,800 | 32,000 | 105,100 | 400 | 26,100 | 212,400 | 918 | 7,610 | 29,000 | 37,528 |
| 1980 | 127,000 | 16,000 | 75,000 | 70,500 | 1,500 | 68,000 | 358,000 | 3,600 | 33,000 | 40,400 | 77,000 |
| 1981 | 93,000 | 4,700 | 59,000 | 76,500 | 20,000 | 27,000 | 280,200 | 950 | 1,500 | 18,700 | 21,150 |
| 1982 | 50,000 | 5,500 | 60,000 | 43,000 | 20,000 | 32,000 | 210,500 | 1,066 | 10,791 | 5,000 | 16,857 |
| 1983 | - | - | - | - | - | - | - | - | - | 6,000 | 6,000 |
| 1984 | 50,000 | 22,200 | 70,000 | 30,500 | 31,000 | 36,000 | 239,700 | - | - | 8,200 | 8,200 |
| 1985 | 28,000 | 5,500 | 36,000 | 65,000 | 5,500 | 17,000 | 157,000 | 350 | 450 | 1,200 | 2,000 |
| 1986 | 60,000 | 15,300 | 47,000 | 76,000 | 39,000 | 27,000 | 264,300 | - | - | 8,300 | 8,300 |
| 1987 | 52,000 | 12,200 | 133,000 | 88,400 | 45,900 | 32,500 | 364,000 | - | - | 1,000 | 1,000 |
| 1988 | 54,000 | 71,000 | 83,700 | 106,500 | 2,300 | 26,500 | 344,000 | - | - | 4,600 | 4,600 |
| 1989 | 19,300 | 21,000 | 64,000 | 133,000 | 1,000 | 7,500 | 245,800 | - | - | 2,100 | 2,100 |
| 1990 | 32,600 | 7,400 | 35,900 | 49,800 | 2,200 | 18,000 | 145,900 | 300 | 0 | 50 | 350 |
| 1991 | 14,600 | 19,500 | 48,000 | - | 2,000 | 13,000 | 97,100 | - | - | - | - |
| 1992 ^b | 600 | - | - | 392,000 | - | - | - | - | - | - | - |
| 1993 | 40,900 | 12,600 | 97,600 | 8,000 | 77,000 | 18,200 | 254,300 | - | - | 16,000 | 16,000 |

^a Dashes represent no surveys taken or survey results not adequate to make stream estimate.

^b Survey considered incomplete for all streams except the Alec River.

Table 31. Chignik Bay District pink salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993.^{a,b}

| Year | Catch | Escapement ^c | Run | Year | Catch | Escapement | Run |
|------|-------|-------------------------|-------|------|-------|------------|-------|
| 1962 | 36.7 | 30.0 | 66.7 | 1978 | 137.1 | 10.7 | 147.8 |
| 1963 | 63.7 | 20.7 | 84.4 | 1979 | 312.4 | 1.2 | 313.6 |
| 1964 | 123.6 | 20.0 | 143.6 | 1980 | 180.9 | 3.0 | 183.9 |
| 1965 | 31.5 | 11.0 | 42.5 | 1981 | 121.4 | 1.4 | 122.8 |
| 1966 | 18.3 | 71.3 | 89.6 | 1982 | 83.0 | 2.4 | 85.4 |
| 1967 | 27.4 | 5.7 | 33.1 | 1983 | 27.3 | 1.0 | 28.3 |
| 1968 | 230.2 | 81.4 | 311.6 | 1984 | 165.2 | 123.2 | 288.4 |
| 1969 | 29.5 | 11.7 | 41.2 | 1985 | 14.4 | 0.0 | 14.4 |
| 1970 | 46.3 | 43.6 | 89.9 | 1986 | 191.3 | 0.0 | 191.3 |
| 1971 | 65.3 | 5.5 | 70.8 | 1987 | 13.9 | 0.0 | 13.9 |
| 1972 | 31.6 | 5.8 | 37.4 | 1988 | 119.8 | 22.4 | 142.2 |
| 1973 | 22.7 | 2.2 | 24.9 | 1989 | 27.7 | 13.5 | 41.2 |
| 1974 | 33.5 | 4.0 | 37.5 | 1990 | 94.5 | 6.0 | 100.5 |
| 1975 | 27.4 | 1.2 | 28.6 | 1991 | 76.2 | 12.2 | 88.4 |
| 1976 | 108.8 | 12.3 | 121.1 | 1992 | 178.2 | 55.8 | 234.0 |
| 1977 | 60.9 | 3.0 | 63.9 | 1993 | 55.9 | 2.0 | 57.9 |

^c Chignik Bay District escapements are not completely monitored.

Table 32. Central District pink salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993.^{a,b}

| Year | Catch | Escapement | Run | Year | Catch | Escapement | Run |
|------|-------|------------|-------|------|-------|------------|-------|
| 1962 | 84.3 | 83.9 | 168.2 | 1978 | 61.2 | 101.2 | 162.4 |
| 1963 | 121.3 | 92.6 | 213.9 | 1979 | 284.4 | 297.0 | 581.4 |
| 1964 | 71.9 | 131.1 | 203.0 | 1980 | 108.7 | 99.4 | 208.1 |
| 1965 | 69.5 | 65.8 | 135.3 | 1981 | 210.0 | 76.5 | 286.5 |
| 1966 | 17.4 | 62.6 | 80.0 | 1982 | 80.6 | 26.1 | 106.7 |
| 1967 | 26.0 | 18.5 | 44.5 | 1983 | 7.9 | 11.0 | 18.9 |
| 1968 | 45.4 | 66.1 | 111.5 | 1984 | 47.3 | 94.0 | 141.3 |
| 1969 | 1.4 | 69.6 | 71.0 | 1985 | 16.1 | 7.4 | 23.5 |
| 1970 | 27.9 | 60.7 | 88.6 | 1986 | 44.1 | 121.9 | 166.0 |
| 1971 | 20.5 | 74.8 | 95.3 | 1987 | 7.8 | 65.7 | 73.5 |
| 1972 | 0.8 | 3.1 | 3.9 | 1988 | 318.4 | 216.4 | 534.8 |
| 1973 | 0.3 | 50.2 | 50.5 | 1989 | 0.0 | 215.0 | 215.0 |
| 1974 | 22.1 | 9.8 | 31.9 | 1990 | 233.7 | 131.9 | 365.6 |
| 1975 | 31.3 | 26.4 | 57.7 | 1991 | 174.0 | 201.1 | 375.1 |
| 1976 | 16.6 | 66.0 | 82.6 | 1992 | 205.7 | 223.8 | 429.5 |
| 1977 | 120.0 | 199.9 | 319.9 | 1993 | 198.5 | 160.9 | 359.4 |

^a Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett 1988).

^b Catches (1970-1993) were updated using historical electronic fish ticket databases.

Table 33. Eastern District pink salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993.^{a,b}

| Year | Catch | Escapement | Run | Year | Catch | Escapement | Run |
|------|---------|------------|---------|------|---------|------------|---------|
| 1962 | 1,109.9 | 401.7 | 1,511.6 | 1978 | 86.8 | 309.3 | 396.1 |
| 1963 | 26.9 | 126.2 | 153.1 | 1979 | 292.4 | 194.3 | 486.7 |
| 1964 | 1,251.5 | 605.7 | 1,857.2 | 1980 | 472.5 | 425.5 | 898.0 |
| 1965 | 25.7 | 64.8 | 90.5 | 1981 | 173.3 | 154.7 | 328.0 |
| 1966 | 386.2 | 302.2 | 688.4 | 1982 | 89.1 | 301.5 | 390.6 |
| 1967 | 22.6 | 56.1 | 78.7 | 1983 | 7.8 | 46.3 | 54.1 |
| 1968 | 523.4 | 390.3 | 913.7 | 1984 | 57.7 | 486.5 | 544.2 |
| 1969 | 1.7 | 46.0 | 47.7 | 1985 | 6.6 | 212.1 | 218.7 |
| 1970 | 268.9 | 201.7 | 470.6 | 1986 | 49.6 | 580.7 | 630.3 |
| 1971 | 29.0 | 23.0 | 52.0 | 1987 | 2.1 | 215.6 | 217.7 |
| 1972 | 12.9 | 15.9 | 28.8 | 1988 | 1,006.4 | 1,005.4 | 2,011.8 |
| 1973 | 2.5 | 12.8 | 15.3 | 1989 | 0.0 | 881.0 | 881.0 |
| 1974 | 0.6 | 76.2 | 76.8 | 1990 | 40.6 | 811.4 | 852.0 |
| 1975 | 0.0 | 23.5 | 23.5 | 1991 | 28.0 | 125.0 | 153.0 |
| 1976 | 28.8 | 228.8 | 257.6 | 1992 | 183.1 | 1,318.1 | 1,501.2 |
| 1977 | 0.2 | 76.0 | 76.2 | 1993 | 59.3 | 524.7 | 584.0 |

Table 34. Western District pink salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993.^{a,b}

| Year | Catch | Escapement | Run | Year | Catch | Escapement | Run |
|------|-------|------------|-------|------|---------|------------|---------|
| 1962 | 81.0 | 242.0 | 323.0 | 1978 | 419.3 | 333.4 | 752.7 |
| 1963 | 516.9 | 305.0 | 821.9 | 1979 | 744.6 | 185.0 | 929.6 |
| 1964 | 112.9 | 165.0 | 277.9 | 1980 | 216.5 | 139.5 | 356.0 |
| 1965 | 345.6 | 152.0 | 497.6 | 1981 | 433.6 | 249.3 | 682.9 |
| 1966 | 173.2 | 179.3 | 352.5 | 1982 | 602.4 | 45.9 | 648.3 |
| 1967 | 27.1 | 104.4 | 131.5 | 1983 | 164.3 | 36.0 | 200.3 |
| 1968 | 295.6 | 151.3 | 446.9 | 1984 | 173.8 | 188.0 | 361.8 |
| 1969 | 485.0 | 422.0 | 907.0 | 1985 | 80.6 | 67.5 | 148.1 |
| 1970 | 442.7 | 202.0 | 644.7 | 1986 | 200.8 | 43.8 | 244.6 |
| 1971 | 285.4 | 268.8 | 554.2 | 1987 | 187.7 | 38.3 | 226.0 |
| 1972 | 14.9 | 8.6 | 23.5 | 1988 | 1,141.4 | 232.4 | 1,373.8 |
| 1973 | 0.0 | 62.4 | 62.4 | 1989 | 0.0 | 57.9 | 57.9 |
| 1974 | 13.4 | 77.4 | 90.8 | 1990 | 135.8 | 44.3 | 180.1 |
| 1975 | 7.4 | 141.7 | 149.1 | 1991 | 419.3 | 96.8 | 516.1 |
| 1976 | 135.8 | 114.2 | 250.0 | 1992 | 628.9 | 38.8 | 667.7 |
| 1977 | 379.0 | 355.5 | 734.5 | 1993 | 685.6 | 45.8 | 731.4 |

^a Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett 1988).

^b Catches (1970-1993) were updated using historical electronic fish ticket databases.

Table 35. Perryville District pink salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993.^{a,b}

| Year | Catch | Escapement | Run | Year | Catch | Escapement | Run |
|------|---------|------------|---------|------|-------|------------|---------|
| 1962 | 207.4 | 155.5 | 362.9 | 1978 | 280.8 | 157.5 | 438.3 |
| 1963 | 933.6 | 162.0 | 1,095.6 | 1979 | 271.4 | 181.3 | 452.7 |
| 1964 | 122.6 | 72.0 | 194.6 | 1980 | 114.6 | 74.8 | 189.4 |
| 1965 | 644.8 | 82.0 | 726.8 | 1981 | 224.3 | 116.0 | 340.3 |
| 1966 | 88.2 | 90.0 | 178.2 | 1982 | 18.3 | 13.4 | 31.7 |
| 1967 | 5.2 | 155.3 | 160.5 | 1983 | 113.9 | 64.5 | 178.4 |
| 1968 | 196.1 | 128.7 | 324.8 | 1984 | 0.8 | 109.8 | 110.6 |
| 1969 | 1,262.2 | 218.6 | 1,480.8 | 1985 | 42.5 | 235.2 | 277.7 |
| 1970 | 371.4 | 72.6 | 444.0 | 1986 | 161.3 | 180.5 | 341.8 |
| 1971 | 212.1 | 45.0 | 257.1 | 1987 | 35.3 | 65.7 | 101.0 |
| 1972 | 12.0 | 7.8 | 19.8 | 1988 | 411.2 | 181.3 | 592.5 |
| 1973 | 0.0 | 31.5 | 31.5 | 1989 | 0.0 | 267.4 | 267.4 |
| 1974 | 0.0 | 60.2 | 60.2 | 1990 | 45.4 | 88.4 | 133.8 |
| 1975 | 0.0 | 45.3 | 45.3 | 1991 | 471.9 | 343.5 | 815.4 |
| 1976 | 105.2 | 89.3 | 194.5 | 1992 | 358.2 | 190.4 | 548.6 |
| 1977 | 44.6 | 115.4 | 160.0 | 1993 | 649.1 | 448.4 | 1,097.5 |

Table 36. Total Chignik Management Area pink salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993.^{a,b}

| Year | Catch | Escapement | Run | Year | Catch | Escapement | Run |
|------|---------|------------|---------|------|---------|------------|---------|
| 1962 | 1,519.3 | 913.1 | 2,432.4 | 1978 | 985.2 | 912.1 | 1,897.3 |
| 1963 | 1,662.4 | 706.5 | 2,368.9 | 1979 | 1,905.2 | 858.8 | 2,764.0 |
| 1964 | 1,682.5 | 993.8 | 2,676.3 | 1980 | 1,093.2 | 742.2 | 1,835.4 |
| 1965 | 1,117.1 | 375.6 | 1,492.7 | 1981 | 1,162.6 | 597.9 | 1,760.5 |
| 1966 | 683.3 | 705.4 | 1,388.7 | 1982 | 873.4 | 389.3 | 1,262.7 |
| 1967 | 108.3 | 340.0 | 448.3 | 1983 | 321.2 | 158.8 | 480.0 |
| 1968 | 1,290.7 | 817.8 | 2,108.5 | 1984 | 444.8 | 1,001.5 | 1,446.3 |
| 1969 | 1,779.8 | 767.9 | 2,547.7 | 1985 | 160.2 | 522.2 | 682.4 |
| 1970 | 1,157.2 | 580.6 | 1,737.8 | 1986 | 647.1 | 926.9 | 1574.0 |
| 1971 | 612.3 | 417.1 | 1,029.4 | 1987 | 246.8 | 385.3 | 632.1 |
| 1972 | 72.2 | 41.2 | 113.4 | 1988 | 2,997.2 | 1,657.9 | 4,655.1 |
| 1973 | 25.5 | 159.1 | 184.6 | 1989 | 27.7 | 1,434.8 | 1,462.5 |
| 1974 | 69.6 | 227.6 | 297.2 | 1990 | 550.0 | 1,082.0 | 1,632.0 |
| 1975 | 66.1 | 238.1 | 304.2 | 1991 | 1,169.4 | 778.6 | 1,948.0 |
| 1976 | 395.2 | 510.6 | 905.8 | 1992 | 1,554.1 | 1,826.9 | 3,381.0 |
| 1977 | 604.7 | 749.8 | 1,354.5 | 1993 | 1,648.4 | 1,181.8 | 2,830.2 |

^a Post 1984 escapement estimates computed by area-under-the- curve methodology using a 15.0 day average stream life (Johnson and Barrett 1988).

^b Catches (1970-1993) were updated using historical electronic fish ticket databases.

Table 37. Chignik Bay District chum salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993.^{a,b}

| Year | Catch | Escapement ^b | Run | Year | Catch | Escapement | Run |
|------|-------|-------------------------|------|------|-------|------------|------|
| 1962 | 5.2 | 6.7 | 11.9 | 1978 | 15.0 | 2.1 | 17.1 |
| 1963 | 5.3 | 0.8 | 6.1 | 1979 | 32.2 | 1.6 | 33.8 |
| 1964 | 8.5 | 2.5 | 11.0 | 1980 | 19.9 | 0.3 | 20.2 |
| 1965 | 1.2 | 3.0 | 4.2 | 1981 | 38.1 | 0.5 | 38.6 |
| 1966 | 6.6 | 4.5 | 11.1 | 1982 | 16.0 | 1.4 | 17.4 |
| 1967 | 5.9 | 4.0 | 9.9 | 1983 | 16.7 | 0.1 | 16.8 |
| 1968 | 5.4 | 1.0 | 6.4 | 1984 | 8.2 | 0.3 | 8.5 |
| 1969 | 2.9 | 1.5 | 4.4 | 1985 | 4.9 | 0.0 | 4.9 |
| 1970 | 1.7 | 21.0 | 22.7 | 1986 | 18.2 | 0.0 | 18.2 |
| 1971 | 19.4 | 7.1 | 26.5 | 1987 | 5.2 | 0.1 | 5.3 |
| 1972 | 18.2 | 3.3 | 21.5 | 1988 | 7.0 | 15.3 | 22.3 |
| 1973 | 7.3 | 0.7 | 8.0 | 1989 | 1.6 | 4.2 | 5.8 |
| 1974 | 17.3 | 2.1 | 19.4 | 1990 | 11.5 | 1.5 | 13.0 |
| 1975 | 21.2 | 2.1 | 23.3 | 1991 | 17.5 | 0.0 | 17.5 |
| 1976 | 19.2 | 2.4 | 21.6 | 1992 | 12.7 | 0.1 | 12.8 |
| 1977 | 8.6 | 2.0 | 10.6 | 1993 | 8.1 | 0.3 | 8.4 |

^c Chignik Bay District escapements not completely monitored.

Table 38. Central District chum salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993.^{a,b}

| Year | Catch | Escapement | Run | Year | Catch | Escapement | Run |
|------|-------|------------|-------|------|-------|------------|-------|
| 1962 | 132.0 | 40.4 | 172.4 | 1978 | 10.3 | 13.8 | 24.1 |
| 1963 | 23.1 | 34.0 | 57.1 | 1979 | 11.4 | 44.8 | 56.2 |
| 1964 | 50.3 | 24.2 | 74.5 | 1980 | 38.9 | 34.2 | 73.1 |
| 1965 | 37.8 | 19.2 | 57.0 | 1981 | 160.7 | 26.1 | 186.8 |
| 1966 | 20.9 | 10.0 | 30.9 | 1982 | 33.7 | 49.4 | 83.1 |
| 1967 | 9.9 | 17.2 | 27.1 | 1983 | 9.8 | 17.0 | 26.8 |
| 1968 | 4.2 | 14.5 | 18.7 | 1984 | 8.2 | 35.4 | 43.6 |
| 1969 | 3.2 | 6.5 | 9.7 | 1985 | 5.2 | 9.6 | 14.8 |
| 1970 | 28.6 | 23.4 | 52.0 | 1986 | 29.5 | 31.0 | 60.5 |
| 1971 | 13.7 | 29.1 | 42.9 | 1987 | 9.4 | 17.5 | 26.9 |
| 1972 | 1.6 | 14.2 | 15.8 | 1988 | 39.3 | 55.8 | 95.1 |
| 1973 | 0.2 | 12.2 | 14.4 | 1989 | 0.0 | 34.7 | 34.7 |
| 1974 | 13.5 | 18.1 | 31.6 | 1990 | 113.7 | 28.0 | 141.7 |
| 1975 | 3.2 | 18.8 | 22.0 | 1991 | 51.4 | 18.0 | 69.4 |
| 1976 | 3.4 | 17.8 | 21.2 | 1992 | 45.5 | 173.1 | 218.6 |
| 1977 | 8.9 | 9.3 | 18.2 | 1993 | 43.0 | 39.4 | 82.4 |

^a Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett 1988).

^b Catches (1970-1993) were updated using historical electronic fish ticket databases.

Table 39. Eastern District chum salmon catch, escapement, and run numbers, in thousands of fish, 1962-1992.^{a,b}

| Year | Catch | Escapement | Run | Year | Catch | Escapement | Run |
|------|-------|------------|-------|------|-------|------------|-------|
| 1962 | 74.7 | 79.6 | 154.3 | 1978 | 17.5 | 55.8 | 73.3 |
| 1963 | 20.5 | 55.2 | 75.7 | 1979 | 36.1 | 79.5 | 115.6 |
| 1964 | 242.7 | 165.4 | 408.1 | 1980 | 56.8 | 107.0 | 163.8 |
| 1965 | 32.4 | 58.0 | 90.4 | 1981 | 108.7 | 126.0 | 234.7 |
| 1966 | 130.1 | 58.0 | 188.1 | 1982 | 64.5 | 145.4 | 209.9 |
| 1967 | 24.4 | 89.8 | 114.2 | 1983 | 8.3 | 50.2 | 58.5 |
| 1968 | 110.1 | 63.0 | 173.1 | 1984 | 21.1 | 214.7 | 235.8 |
| 1969 | 3.7 | 66.5 | 70.2 | 1985 | 0.9 | 4.9 | 5.8 |
| 1970 | 241.1 | 126.0 | 367.1 | 1986 | 17.9 | 8.5 | 26.4 |
| 1971 | 102.3 | 219.2 | 321.5 | 1987 | 8.9 | 38.3 | 47.2 |
| 1972 | 27.7 | 107.4 | 135.1 | 1988 | 77.5 | 221.9 | 99.4 |
| 1973 | 1.2 | 59.1 | 60.3 | 1989 | 0.0 | 74.3 | 74.3 |
| 1974 | 0.3 | 76.3 | 76.5 | 1990 | 27.5 | 139.7 | 167.2 |
| 1975 | 0.0 | 41.3 | 41.3 | 1991 | 4.9 | 70.4 | 75.3 |
| 1976 | 10.0 | 122.3 | 132.3 | 1992 | 61.2 | 306.9 | 368.1 |
| 1977 | 1.5 | 54.5 | 56.0 | 1993 | 21.4 | 135.2 | 156.6 |

Table 40. Western District chum salmon catch, escapement, and run numbers, in thousands of fish, 1962-1992.^{a,b}

| Year | Catch | Escapement | Run | Year | Catch | Escapement | Run |
|------|-------|------------|-------|------|-------|------------|-------|
| 1962 | 134.4 | 83.1 | 217.5 | 1978 | 46.0 | 27.3 | 73.3 |
| 1963 | 44.7 | 10.0 | 54.7 | 1979 | 82.3 | 42.5 | 124.8 |
| 1964 | 21.2 | 37.0 | 58.2 | 1980 | 91.9 | 56.5 | 148.4 |
| 1965 | 36.4 | 25.0 | 61.4 | 1981 | 221.6 | 70.3 | 291.9 |
| 1966 | 73.8 | 12.0 | 85.8 | 1982 | 253.3 | 35.4 | 288.7 |
| 1967 | 33.6 | 24.0 | 57.6 | 1983 | 102.0 | 20.1 | 122.1 |
| 1968 | 90.1 | 9.6 | 99.7 | 1984 | 25.4 | 73.8 | 99.2 |
| 1969 | 36.8 | 27.6 | 64.4 | 1985 | 10.7 | 34.6 | 45.3 |
| 1970 | 139.6 | 49.7 | 189.3 | 1986 | 74.1 | 5.3 | 79.4 |
| 1971 | 177.5 | 184.1 | 361.6 | 1987 | 86.9 | 19.7 | 106.6 |
| 1972 | 18.5 | 59.0 | 77.5 | 1988 | 102.7 | 27.4 | 130.1 |
| 1973 | 0.0 | 35.6 | 35.6 | 1989 | 0.0 | 7.4 | 7.4 |
| 1974 | 3.2 | 39.4 | 42.6 | 1990 | 91.6 | 28.8 | 120.4 |
| 1975 | 0.8 | 43.4 | 44.2 | 1991 | 98.6 | 38.1 | 136.7 |
| 1976 | 33.1 | 55.0 | 88.1 | 1992 | 65.5 | 53.3 | 118.8 |
| 1977 | 88.0 | 70.4 | 158.4 | 1993 | 25.0 | 14.0 | 39.0 |

^a Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett).

^b Catches (1970-1992) were updated using historical electronic fish ticket databases.

Table 41. Perryville District chum salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993.^{a,b}

| Year | Catch | Escapement | Run | Year | Catch | Escapement | Run |
|------|-------|------------|------|------|-------|-------------------|-------|
| 1962 | 17.9 | 10.5 | 28.4 | 1978 | 32.1 | 5.3 | 37.4 |
| 1963 | 19.1 | 7.0 | 26.1 | 1979 | 26.9 | 12.8 | 39.7 |
| 1964 | 10.6 | 26.0 | 36.6 | 1980 | 45.0 | 29.1 | 74.1 |
| 1965 | 12.8 | 7.0 | 19.8 | 1981 | 51.3 | 19.3 | 70.6 |
| 1966 | 7.9 | 20.4 | 28.3 | 1982 | 22.6 | 23.6 | 46.2 |
| 1967 | 1.7 | 5.7 | 7.4 | 1983 | 22.6 | 8.2 | 30.8 |
| 1968 | 14.0 | 1.8 | 15.8 | 1984 | 0.5 | 46.0 | 46.5 |
| 1969 | 21.1 | 1.0 | 22.1 | 1985 | 1.1 | 12.9 | 14.0 |
| 1970 | 26.3 | 13.0 | 39.3 | 1986 | 37.0 | 7.7 | 44.7 |
| 1971 | 40.9 | 30.0 | 70.9 | 1987 | 16.9 | 9.8 | 26.7 |
| 1972 | 12.3 | 11.5 | 23.8 | 1988 | 41.2 | 41.4 | 82.6 |
| 1973 | 0.0 | 9.3 | 9.3 | 1989 | 0.0 | 15.9 | 15.9 |
| 1974 | 0.0 | 12.5 | 12.5 | 1990 | 25.7 | 55.8 | 81.5 |
| 1975 | 0.0 | 20.5 | 20.5 | 1991 | 88.6 | 343.2 | 431.8 |
| 1976 | 15.7 | 8.9 | 24.6 | 1992 | 37.2 | 40.3 ^c | 77.5 |
| 1977 | 3.4 | 15.4 | 18.8 | 1993 | 24.7 | 66.8 | 91.5 |

^c The late run at Perryville was not monitored 1992 or 1993.

Table 42. Total Chignik Management Area chum salmon catch, escapement, and run numbers, in thousands of fish, 1962-1993.^{a,b}

| Year | Catch | Escapement | Run | Year | Catch | Escapement | Run |
|------|-------|------------|-------|------|-------|------------|-------|
| 1962 | 364.2 | 220.3 | 584.5 | 1978 | 120.9 | 104.3 | 225.2 |
| 1963 | 112.7 | 107.0 | 219.7 | 1979 | 188.9 | 181.2 | 370.1 |
| 1964 | 333.3 | 255.1 | 588.4 | 1980 | 252.5 | 227.1 | 479.6 |
| 1965 | 120.6 | 112.2 | 232.8 | 1981 | 580.4 | 242.2 | 822.6 |
| 1966 | 239.3 | 104.9 | 344.2 | 1982 | 390.1 | 255.2 | 645.3 |
| 1967 | 75.5 | 140.7 | 216.2 | 1983 | 159.4 | 95.6 | 255.0 |
| 1968 | 223.8 | 89.9 | 313.7 | 1984 | 63.4 | 370.2 | 433.6 |
| 1969 | 67.7 | 103.1 | 170.8 | 1985 | 22.8 | 62.0 | 84.8 |
| 1970 | 437.3 | 233.1 | 670.4 | 1986 | 176.7 | 52.5 | 229.2 |
| 1971 | 353.8 | 469.5 | 823.3 | 1987 | 127.3 | 85.4 | 212.7 |
| 1972 | 78.3 | 195.4 | 273.7 | 1988 | 267.7 | 361.8 | 629.5 |
| 1973 | 8.7 | 116.9 | 125.6 | 1989 | 1.6 | 136.5 | 138.1 |
| 1974 | 34.3 | 148.4 | 182.7 | 1990 | 270.0 | 253.8 | 523.8 |
| 1975 | 25.2 | 126.1 | 151.3 | 1991 | 261.0 | 469.7 | 730.7 |
| 1976 | 81.4 | 206.4 | 287.8 | 1992 | 222.1 | 573.7 | 795.8 |
| 1977 | 110.4 | 151.6 | 262.0 | 1993 | 122.4 | 255.7 | 378.1 |

^a Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett 1988).

^b Catches (1970-1993) were updated using historical electronic fish ticket databases.

Table 43. Pink salmon return per spawner in the Central and Eastern Districts, 1962-1993.^{a,b}

| Even Year Cycle | | | | Odd Year Cycle | | | |
|-----------------|-----------------|--------------------|----------------|----------------|-----------------|--------------------|----------------|
| Brood Year | Pink Escapement | Return 2-yrs Later | Return/Spawner | Brood Year | Pink Escapement | Return 2-yrs Later | Return/Spawner |
| 1962 | 485,600 | 2,060,200 | 4.2 | 1963 | 218,800 | 225,800 | 1.0 |
| 1964 | 736,800 | 768,400 | 1.0 | 1965 | 130,600 | 123,200 | 0.9 |
| 1966 | 364,800 | 1,025,200 | 2.8 | 1967 | 74,600 | 118,700 | 1.6 |
| 1968 | 456,400 | 559,800 | 1.2 | 1969 | 115,600 | 147,300 | 1.3 |
| 1970 | 262,400 | 32,700 | 0.1 | 1971 | 97,800 | 65,800 | 0.7 |
| 1972 | 19,000 | 108,700 | 5.7 | 1973 | 63,000 | 81,200 | 1.3 |
| 1974 | 86,000 | 340,200 | 4.0 | 1975 | 49,900 | 396,100 | 7.9 |
| 1976 | 294,800 | 558,500 | 1.9 | 1977 | 275,900 | 1,068,100 | 3.8 |
| 1978 | 410,500 | 1,106,100 | 2.7 | 1979 | 491,300 | 614,500 | 1.3 |
| 1980 | 524,900 | 497,300 | 0.9 | 1981 | 231,200 | 73,000 | 0.3 |
| 1982 | 327,600 | 685,500 | 2.1 | 1983 | 57,300 | 242,200 | 4.2 |
| 1984 | 580,500 | 796,300 | 1.4 | 1985 | 219,500 | 291,200 | 1.3 |
| 1986 | 702,600 | 2,546,600 | 3.6 | 1987 | 281,300 | 1,096,000 | 3.9 |
| 1988 | 1,221,800 | 1,217,600 | 1.0 | 1989 | 1,096,000 | 528,100 | 0.5 |
| 1990 | 943,300 | 1,930,700 | 2.0 | 1991 | 326,100 | 943,400 | 2.9 |
| 1992 | 1,541,900 | | | 1993 | 685,600 | | |

Table 44. Pink salmon return per spawner in the Western and Perryville Districts, 1962-1993.^{a,b}

| Even Year Cycle | | | | Odd Year Cycle | | | |
|-----------------|-----------------|--------------------|----------------|----------------|-----------------|--------------------|----------------|
| Brood Year | Pink Escapement | Return 2-yrs Later | Return/Spawner | Brood Year | Pink Escapement | Return 2-yrs Later | Return/Spawner |
| 1962 | 397,500 | 472,500 | 1.2 | 1963 | 467,000 | 1,225,400 | 2.6 |
| 1964 | 237,000 | 530,700 | 2.2 | 1965 | 234,600 | 292,000 | 1.2 |
| 1966 | 269,300 | 771,700 | 2.9 | 1967 | 259,700 | 2,387,800 | 9.2 |
| 1968 | 280,000 | 1,088,700 | 3.9 | 1969 | 640,600 | 811,300 | 1.3 |
| 1970 | 274,600 | 43,300 | 0.2 | 1971 | 313,800 | 93,900 | 0.3 |
| 1972 | 16,400 | 151,000 | 9.2 | 1973 | 93,900 | 194,400 | 2.1 |
| 1974 | 137,600 | 444,500 | 3.2 | 1975 | 187,000 | 894,500 | 4.8 |
| 1976 | 203,500 | 1,191,000 | 5.9 | 1977 | 470,900 | 1,382,300 | 2.9 |
| 1978 | 490,900 | 545,400 | 1.1 | 1979 | 366,300 | 1,023,200 | 2.8 |
| 1980 | 214,300 | 680,000 | 3.2 | 1981 | 365,300 | 378,700 | 1.0 |
| 1982 | 59,300 | 472,400 | 8.0 | 1983 | 100,500 | 425,800 | 4.2 |
| 1984 | 297,800 | 586,400 | 2.0 | 1985 | 302,700 | 327,000 | 1.1 |
| 1986 | 224,300 | 1,966,300 | 8.8 | 1987 | 104,000 | 325,300 | 3.1 |
| 1988 | 413,700 | 313,900 | 0.8 | 1989 | 325,300 | 1,331,500 | 4.1 |
| 1990 | 132,700 | 1,216,300 | 9.2 | 1991 | 440,300 | 1,828,800 | 4.2 |
| 1992 | 229,200 | | | 1993 | 494,200 | | |

^a Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett 1988).

^b Catches (1970-1993) were updated using historical electronic fish ticket databases.

Table 45. Chum salmon return per spawner in the Central and Eastern Districts, 1962-1993.^{a,b}

| Brood Year | Chum Escapement | Return 4-yrs Later | Return/ Spawner | Brood Year | Chum Escapement | Return 4-yrs Later | Return/ Spawner |
|---------------|--------------------|--------------------------|--------------------|---------------|--------------------|--------------------------|--------------------|
| 1962 | 120,000 | 219,000 | 1.8 | 1978 | 69,600 | 293,000 | 4.2 |
| 1963 | 89,200 | 141,300 | 1.6 | 1979 | 124,300 | 85,300 | 0.7 |
| 1964 | 189,600 | 191,800 | 1.0 | 1980 | 141,200 | 279,400 | 2.0 |
| 1965 | 77,200 | 79,900 | 1.0 | 1981 | 152,100 | 20,600 | 0.1 |
| 1966 | 68,000 | 149,400 | 2.2 | 1982 | 194,800 | 86,900 | 0.4 |
| 1967 | 107,000 | 364,400 | 3.4 | 1983 | 67,200 | 74,100 | 1.1 |
| 1968 | 77,500 | 150,900 | 2.0 | 1984 | 250,100 | 194,500 | 0.8 |
| 1969 | 73,000 | 72,700 | 1.0 | 1985 | 14,500 | 109,000 | 7.5 |
| 1970 | 149,400 | 108,700 | 0.7 | 1986 | 39,500 | 308,900 | 7.8 |
| 1971 | 248,300 | 63,300 | 0.3 | 1987 | 55,800 | 144,700 | 2.6 |
| 1972 | 121,600 | 153,500 | 1.3 | 1988 | 277,700 | 586,700 | 2.1 |
| 1973 | 71,300 | 74,200 | 1.0 | 1989 | 109,000 | 239,000 | 2.2 |
| 1974 | 94,400 | 97,400 | 1.0 | 1990 | 167,700 | | |
| 1975 | 60,100 | 171,800 | 2.9 | 1991 | 88,400 | | |
| 1976 | 140,100 | 236,900 | 1.7 | 1992 | 480,000 | | |
| 1977 | 63,800 | 421,500 | 6.6 | 1993 | 174,600 | | |

Table 46. Chum salmon return per spawner in the Western and Perryville Districts, 1962-1993.^a

| Brood Year | Chum Escapement | Return 4-yrs Later | Return/ Spawner | Brood Year | Chum Escapement | Return 4-yrs Later | Return/ Spawner |
|---------------|--------------------|--------------------------|--------------------|---------------|--------------------|--------------------------|--------------------|
| 1962 | 93,600 | 114,100 | 1.2 | 1978 | 32,600 | 334,900 | 10.3 |
| 1963 | 17,000 | 65,000 | 3.8 | 1979 | 55,300 | 152,900 | 2.8 |
| 1964 | 63,000 | 115,500 | 1.8 | 1980 | 85,600 | 145,700 | 1.7 |
| 1965 | 32,000 | 86,500 | 2.7 | 1981 | 89,600 | 59,300 | 0.7 |
| 1966 | 32,400 | 228,600 | 7.1 | 1982 | 59,000 | 124,100 | 2.1 |
| 1967 | 29,700 | 432,500 | 14.6 | 1983 | 28,300 | 133,300 | 4.7 |
| 1968 | 11,400 | 101,300 | 8.9 | 1984 | 119,800 | 212,700 | 1.8 |
| 1969 | 28,600 | 44,900 | 1.6 | 1985 | 47,500 | 23,300 | 0.5 |
| 1970 | 62,700 | 55,100 | 0.9 | 1986 | 13,000 | 201,900 | 15.5 |
| 1971 | 214,100 | 64,700 | 0.3 | 1987 | 29,500 | 568,500 | 19.3 |
| 1972 | 70,500 | 112,700 | 1.6 | 1988 | 68,800 | 196,300 | 2.9 |
| 1973 | 44,900 | 177,200 | 3.9 | 1989 | 23,300 | 130,600 | 5.6 |
| 1974 | 51,900 | 110,700 | 2.1 | 1990 | 84,600 | | |
| 1975 | 63,900 | 164,500 | 2.6 | 1991 | 381,300 | | |
| 1976 | 63,900 | 222,500 | 3.5 | 1992 | 93,600 | | |
| 1977 | 85,800 | 362,500 | 4.2 | 1993 | 80,800 | | |

^a Post 1984 escapement estimates computed by area-under-the-curve methodology using a 15.0 day average stream life (Johnson and Barrett 1988).

^b Catches (1970-1993) were updated using historical electronic fish ticket databases.

Table 47. Pink, chum, and coho salmon aerial stream survey counts in the Chignik Management Area, 1993.

| Stream | Date MM-DD | Observer | Visibility Str Mou Bay | | | -----Fish in Stream----- Reds Coho Pink Chum | | | | Build Up Fish Mouth Bay | | Observer Remarks |
|------------------------|---------------|------------|---------------------------|---|---|---|---|-----|-----|----------------------------|---|------------------|
| Home Creek | | | | | | | | | | | | |
| 271-097 | 8-23 | A. Quimby | g | g | g | 7700 | 0 | 0 | 0 | - | - | - |
| 271-097 | 8-30 | David Owen | g | g | g | 3700 | 0 | 0 | 0 | - | - | - |
| Clark River | | | | | | | | | | | | |
| 271-099 | 8-23 | A. Quimby | g | g | g | 2800 | 0 | 0 | 0 | - | - | - |
| 271-099 | 8-30 | David Owen | g | g | g | 8500 | 0 | 0 | 0 | - | - | - |
| Chiauktuak | | | | | | | | | | | | |
| 271-098 | 8-23 | A. Quimby | g | g | g | 15000 | 0 | 0 | 0 | - | - | - |
| Black Lake Tributaries | | | | | | | | | | | | |
| 271-10 | 7- 8 | A. Quimby | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 271-10 | 7- 8 | A. Quimby | G | G | G | 5600 | 0 | 0 | 0 | - | - | - |
| 271-10 | 8- 4 | A. Quimby | E | E | E | 200 | 0 | 0 | 0 | - | - | - |
| 271-10 | 8- 4 | A. Quimby | E | E | E | 40900 | 0 | 0 | 0 | - | - | - |
| 271-10 | 8- 4 | A. Quimby | E | E | E | 43000 | 0 | 0 | 0 | - | - | - |
| 271-10 | 8- 4 | A. Quimby | E | E | E | 97600 | 0 | 0 | 0 | - | - | - |
| 271-10 | 8- 4 | A. Quimby | E | E | E | 40700 | 0 | 0 | 0 | - | - | - |
| 271-10 | 8- 4 | A. Quimby | E | E | E | 12600 | 0 | 0 | 0 | - | - | - |
| 271-10 | 8- 4 | A. Quimby | E | E | E | 16000 | 0 | 0 | 0 | - | - | - |
| 271-10 | 8- 4 | A. Quimby | E | E | E | 77000 | 0 | 0 | 0 | - | - | - |
| 271-10 | 8- 4 | A. Quimby | E | E | E | 18200 | 0 | 0 | 0 | - | - | - |
| Chignik Bay | | | | | | | | | | | | |
| 271-100 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| Mud Bay | | | | | | | | | | | | |
| 271-102C | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 271-102E | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| Alfred Creek | | | | | | | | | | | | |
| 271-104 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 271-104 | 8- 3 | A. Quimby | E | E | E | 0 | 0 | 0 | 0 | 100P | - | - |
| 271-104 | 8-23 | A. Quimby | g | g | g | 0 | 0 | 400 | 100 | - | - | - |
| Chignik Bay | | | | | | | | | | | | |
| 271-105 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 271-105 | 8- 3 | A. Quimby | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 271-105 | 8-23 | A. Quimby | g | g | g | 0 | 0 | 0 | 0 | - | - | - |
| Through Creek | | | | | | | | | | | | |
| 271-106 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 100 | - | - | - |
| 271-106 | 8- 3 | A. Quimby | E | E | E | 0 | 0 | 300 | 0 | - | - | - |
| 271-106 | 8-23 | A. Quimby | g | g | g | 0 | 0 | 500 | 100 | - | - | - |
| 272-201 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 272-201 | 8-23 | A. Quimby | g | g | g | 0 | 0 | 0 | 25 | - | - | - |

-Continued-

Table 47. (page 2 of 9)

| Stream | Date MM-DD | Observer | Visibility Str Mou Bay | | | -----Fish in Stream----- Reds Coho Pink Chum | | | | Build Up Fish Mouth Bay | | Observer Remarks |
|-----------------|---------------|------------|---------------------------|---|---|---|---|-------|------|----------------------------|-------|------------------------|
| Chignik Bay | | | | | | | | | | | | |
| 272-202A | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 272-202A | 8- 3 | A. Quimby | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 272-202A | 8-23 | A. Quimby | g | g | g | 0 | 0 | 300 | 1000 | - | - | - |
| Neketa Creek | | | | | | | | | | | | |
| 272-202B | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 272-202B | 8- 3 | A. Quimby | E | E | E | 0 | 0 | 1400 | 0 | - | - | - |
| 272-202B | 8-23 | A. Quimby | g | g | g | 0 | 0 | 0 | 0 | - | - | - |
| Thompson Valley | | | | | | | | | | | | |
| 272-204 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 272-204 | 8-23 | A. Quimby | g | g | g | 0 | 0 | 0 | 7500 | - | - | - |
| McKinsey Valley | | | | | | | | | | | | |
| 272-205 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 150 | - | - | - |
| 272-205 | 8-23 | A. Quimby | g | g | g | 0 | 0 | 100 | 0 | - | - | - |
| Dry Creek | | | | | | | | | | | | |
| 272-206 | 8- 3 | A. Quimby | E | E | E | 0 | 0 | 50 | 0 | - | - | - |
| 272-206 | 8-23 | A. Quimby | g | g | g | 0 | 0 | 1500 | 0 | - | - | - |
| Hook Creek | | | | | | | | | | | | |
| 272-302 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 300 | - | - | - |
| 272-302 | 7-25 | A. Quimby | P | P | P | 0 | 0 | 0 | 0 | - | - | NO SURVEY, MUDDY |
| 272-302 | 8- 4 | A. Quimby | E | E | E | 0 | 0 | 12100 | 0 | - | - | - |
| 272-302 | 8-11 | A. Quimby | g | g | g | 0 | 0 | 0 | 1500 | - | - | Spawning in the stream |
| 272-302 | 8-23 | A. Quimby | g | g | g | 0 | 0 | 6500 | 6000 | - | - | - |
| Kumliun Creek | | | | | | | | | | | | |
| 272-501 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | 50P | - |
| 272-501 | 7-25 | A. Quimby | E | E | E | 0 | 0 | 3800 | 0 | 100P | 200P | - |
| 272-501 | 8- 4 | A. Quimby | E | E | E | 0 | 0 | 82000 | 0 | - | - | - |
| 272-501 | 8-11 | A. Quimby | g | g | g | 0 | 0 | 18000 | 0 | 2000P | 1500P | - |
| 272-501 | 8-30 | David Owen | g | g | g | 0 | 0 | 11800 | 0 | - | - | - |
| Cape Kumliun | | | | | | | | | | | | |
| 272-502A | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 272-502A | 7-25 | A. Quimby | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 272-502A | 8-30 | David Owen | g | g | g | 0 | 0 | 500 | 0 | - | - | - |
| Kujulik Bay | | | | | | | | | | | | |
| 272-504 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| Bear Creek | | | | | | | | | | | | |
| 272-505 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | 50Ch | - | - |
| 272-505 | 7-25 | A. Quimby | E | E | E | 0 | 0 | 0 | 1400 | - | - | - |
| 272-505 | 8-11 | A. Quimby | g | g | g | 0 | 0 | 0 | 0 | 4000Ch | - | - |

-Continued-

Table 47. (page 3 of 9)

| Stream | Date MM-DD | Observer | Visibility Str Mou Bay | -----Fish in Stream----- | | | | Build Up Fish | Observer Remarks | |
|------------------|---------------|--------------|---------------------------|--------------------------|------|-------|------|---------------|------------------|------------------------------|
| | | | | Reds | Coho | Pink | Chum | Mouth Bay | | |
| Kujulik Bay | | | | | | | | | | |
| 272-506 | 7-16 | David Owen | E E E | 0 | 0 | 0 | 0 | 2000Ch | - | - |
| Kujulik Bay | | | | | | | | | | |
| 272-507 | 7-16 | David Owen | E E E | 0 | 0 | 0 | 0 | - 2000Ch | - | - |
| Kujulik Bay | | | | | | | | | | |
| 272-508 | 7-16 | David Owen | E E E | 0 | 0 | 0 | 0 | - 100Ch | - | - |
| Rudy Creek | | | | | | | | | | |
| 272-509 | 7-16 | David Owen | E E E | 0 | 0 | 0 | 0 | - 250Ch | - | - |
| 272-509 | 8- 4 | A. Quimby | E E E | 0 | 0 | 2900 | 0 | - | - | - |
| Kujulik Bay | | | | | | | | | | |
| 272-510 | 7-25 | A. Quimby | E E E | 0 | 0 | 0 | 0 | 200Ch | - | - |
| North Fork River | | | | | | | | | | |
| 272-514 | 7-16 | David Owen | E E E | 0 | 0 | 0 | 500 | 1000Ch | - | - |
| 272-514 | 7-25 | A. Quimby | G G G | 0 | 0 | 0 | 1000 | - | - | - |
| 272-514 | 8- 4 | A. Quimby | E E E | 0 | 0 | 24500 | 0 | 300Ch | - | - |
| 272-514 | 8- 9 | L. Nicholson | E E E | 0 | 0 | 7000 | 8000 | - | 10000P | - |
| | | | | | | | | | 10000Ch | - |
| 272-514 | 8-11 | Dave Henly | G G G | 0 | 0 | 0 | 1150 | 2100Ch | - | - |
| Cape Kumlik | | | | | | | | | | |
| 272-516 | 7-16 | David Owen | E E E | 0 | 0 | 0 | 20 | 20Ch | - | - |
| 272-516 | 7-25 | A. Quimby | E E E | 0 | 0 | 100 | 0 | - | - | - |
| 272-516 | 8-30 | David Owen | g g g | 0 | 0 | 7700 | 0 | - | - | - |
| Wolverine Creek | | | | | | | | | | |
| 272-602 | 7-25 | A. Quimby | G G G | 0 | 0 | 0 | 0 | - | - | TWO SPORT FISHERMEN |
| Black Creek | | | | | | | | | | |
| 272-604 | 7-16 | David Owen | E E E | 0 | 0 | 0 | 0 | - | - | - |
| 272-604 | 7-25 | A. Quimby | P P P | 0 | 0 | 0 | 0 | - | - | - |
| Aniakchak River | | | | | | | | | | |
| 272-605 | 7-16 | David Owen | E E E | 3000 | 0 | 0 | 2200 | - | - | REDS-ALBERT JOHNSON CREEK |
| 272-605 | 7-25 | A. Quimby | P P P | 2200 | 0 | 0 | 4000 | - | - | REDS IN ALBERT JOHNSON CREEK |
| 272-605 | 8- 4 | A. Quimby | E E E | 0 | 0 | 0 | 7500 | - | - | - |
| 272-605 | 8- 9 | L. Nicholson | E E E | 0 | 0 | 0 | 0 | - | - | - |

-Continued-

Table 47. (page 4 of 9)

| Stream | Date MM-DD | Observer | Visibility Str Mou Bay | -----Fish in Stream----- | | | | Build Up Fish | | Observer Remarks | |
|------------------------|---------------|--------------|---------------------------|--------------------------|------|-------|-------|---------------|-------------------|------------------|---|
| | | | | Reds | Coho | Pink | Chum | Mouth | Bay | | |
| Cape Ayutka | | | | | | | | | | | |
| 272-606 | 7-16 | David Owen | E E E | 0 | 0 | 0 | 50 | 50Ch | - | - | - |
| 272-606 | 7-25 | A. Quimby | E E E | 0 | 0 | 0 | 0 | - | - | - | - |
| 272-606 | 8- 4 | A. Quimby | E E E | 0 | 0 | 53000 | 0 | - | - | - | - |
| West Creek | | | | | | | | | | | |
| 272-701 | 7-16 | David Owen | E E E | 0 | 0 | 0 | 0 | - | - | - | - |
| 272-701 | 8- 4 | A. Quimby | E E E | 0 | 0 | 0 | 100 | - | - | - | - |
| Main Creek | | | | | | | | | | | |
| 272-702 | 7-16 | David Owen | E E E | 0 | 0 | 0 | 4000 | - | - | - | - |
| 272-702 | 7-25 | A. Quimby | G G G | 0 | 0 | 0 | 6000 | - | - | - | - |
| 272-702 | 8- 4 | A. Quimby | E E E | 1000 | 0 | 25500 | 0 | - | - | - | - |
| 272-702 | 8- 9 | L. Nicholson | E E E | 0 | 0 | 12000 | 10000 | - | 1000P 4000Ch | - | - |
| Northeast Creek | | | | | | | | | | | |
| 272-703 | 8- 4 | A. Quimby | E E E | 500 | 0 | 24200 | 0 | - | - | - | - |
| Yantarni Bay | | | | | | | | | | | |
| 272-720 | 8- 9 | L. Nicholson | E E E | 0 | 0 | 0 | 0 | - | 10000P 25000Ch | - | - |
| Yantarni Creek | | | | | | | | | | | |
| 272-721 | 7-16 | David Owen | E E E | 0 | 0 | 0 | 0 | - | - | - | - |
| 272-721 | 8- 9 | L. Nicholson | P P P | 0 | 0 | 0 | 0 | - | - | TOO MURKY | - |
| Ocean Beach | | | | | | | | | | | |
| 272-801 | 7-16 | David Owen | E E E | 0 | 0 | 0 | 0 | - | - | - | - |
| 272-801 | 8- 2 | L. Nicholson | F F F | 0 | 0 | 0 | 3000 | - | - | - | - |
| 272-801 | 8- 9 | L. Nicholson | E E E | 0 | 0 | 0 | 0 | - | 10000P 20000Ch | - | - |
| Ocean Beach | | | | | | | | | | | |
| 272-802 | 7-16 | David Owen | E E E | 0 | 0 | 0 | 20 | - | - | - | - |
| Nakalilok Bay | | | | | | | | | | | |
| 272-803 | 7-16 | David Owen | E E E | 0 | 0 | 0 | 0 | - | 15Ch | - | - |
| Nakalilok River | | | | | | | | | | | |
| 272-804 | 8- 2 | L. Nicholson | F F F | 0 | 0 | 0 | 0 | 3000Ch | 1000Ch | - | - |
| 272-804 | 8- 9 | L. Nicholson | E E E | 0 | 0 | 0 | 3000 | - | - | - | - |

-Continued-

Table 47. (page 5 of 9)

| Stream | Date MM-DD | Observer | Visibility Str Mou Bay | | | -----Fish in Stream----- Reds Coho Pink Chum | | | | Build Up Fish Mouth Bay | | Observer Remarks | |
|-------------------|---------------|--------------|---------------------------|---|---|---|---|-------|------|----------------------------|--------------------|-----------------------------------|--|
| Nakalilok Bay | | | | | | | | | | | | | |
| 272-805 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - | |
| 272-805 | 8- 2 | L. Nicholson | F | F | F | 0 | 0 | 300 | 0 | 5000P | - | - | |
| 272-805 | 8- 9 | L. Nicholson | E | E | E | 0 | 0 | 2500 | 2000 | - | 30000P 30000Ch | - | |
| Chiginagak River | | | | | | | | | | | | | |
| 272-903 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - | |
| 272-903 | 8- 2 | L. Nicholson | F | F | F | 0 | 0 | 0 | 0 | 1500P | - | - | |
| Chiginagak Bay | | | | | | | | | | | | | |
| 272-904 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - | |
| 272-904 | 8- 2 | L. Nicholson | F | F | F | 0 | 0 | 1500 | 0 | 2000P | - | - | |
| 272-904 | 8- 9 | L. Nicholson | E | E | E | 0 | 0 | 4500 | 0 | - | - | - | |
| Chiginagak Bay | | | | | | | | | | | | | |
| 272-905 | 8- 2 | L. Nicholson | F | F | F | 0 | 0 | 3500 | 0 | 35000P | - | - | |
| 272-905 | 8- 9 | L. Nicholson | E | E | E | 0 | 0 | 10000 | 0 | - | 200000P 30000Ch | - | |
| Chiginagak Bay | | | | | | | | | | | | | |
| 272-907 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - | |
| Port Wrangell Bay | | | | | | | | | | | | | |
| 272-921 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - | |
| Cape Providence | | | | | | | | | | | | | |
| 272-923 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | 100Ch | 200Ch | - | |
| Agripina River | | | | | | | | | | | | | |
| 272-961A | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | 200P | - | - | |
| 272-961A | 8- 2 | L. Nicholson | F | F | F | 0 | 0 | 8000 | 0 | 1000P | - | - | |
| 272-961A | 8- 9 | L. Nicholson | E | E | E | 0 | 0 | 9500 | 0 | - | 130000P | - | |
| Agripina Bay | | | | | | | | | | | | | |
| 272-961B | 7-16 | David Owen | E | E | E | 0 | 0 | 500 | 0 | 2000P | - | - | |
| Glacier Creek | | | | | | | | | | | | | |
| 272-962 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | 1000Ch | - | |
| Kilokak Creek | | | | | | | | | | | | | |
| 272-963 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - | |
| 272-963 | 8- 2 | L. Nicholson | G | G | G | 0 | 0 | 2500 | 0 | 200P | - | - | |
| 272-963 | 8- 9 | L. Nicholson | E | E | E | 0 | 0 | 2000 | 0 | 4000P | - | MOUTH DRIED UP, FISH CAN'T GET IN | |
| 273-403 | 8- 3 | A. Quimby | G | G | G | 0 | 0 | 0 | 0 | - | - | - | |

-Continued-

Table 47. (page 6 of 9)

| Stream | Date MM-DD | Observer | Visibility Str Mou Bay | -----Fish in Stream----- | | | | Build Up Fish Mouth Bay | Observer Remarks |
|------------------------|---------------|------------|---------------------------|--------------------------|------|-------|------|----------------------------|------------------|
| | | | | Reds | Coho | Pink | Chum | | |
| Red Bluff Creek | | | | | | | | | |
| 273-702 | 7- 8 | A. Quimby | E E E | 0 | 0 | 400 | 0 | - | - |
| 273-702 | 7-22 | A. Quimby | P P P | 0 | 0 | 0 | 0 | - | - |
| 273-702 | 7-25 | A. Quimby | E E E | 0 | 0 | 0 | 0 | 6000P | - |
| 273-702 | 7-31 | David Owen | E E E | 0 | 0 | 3400 | 0 | 2000P | - |
| 273-702 | 8- 3 | A. Quimby | E E E | 0 | 0 | 7500 | 0 | - | - |
| 273-702 | 8- 9 | A. Quimby | E E E | 0 | 0 | 4100 | 0 | - | 7000P |
| 273-702 | 8-16 | A. Quimby | g g g | 0 | 0 | 11100 | 0 | - | - |
| Mitrofanina Bay | | | | | | | | | |
| 273-720 | 7- 8 | A. Quimby | P P P | 0 | 0 | 0 | 0 | - | - |
| 273-720 | 7-31 | David Owen | E E E | 0 | 0 | 0 | 0 | - | - |
| Ivan River | | | | | | | | | |
| 273-722 | 7- 8 | A. Quimby | E E E | 0 | 0 | 400 | 0 | - | - |
| 273-722 | 7-22 | A. Quimby | P P P | 0 | 0 | 0 | 0 | - | - |
| 273-722 | 7-31 | David Owen | E E E | 0 | 0 | 0 | 400 | - | - |
| 273-722 | 8- 3 | A. Quimby | E E E | 0 | 0 | 0 | 0 | 2800Ch | - |
| 273-722 | 8- 9 | A. Quimby | E E E | 0 | 0 | 6300 | 1700 | - | - |
| 273-722 | 8-16 | A. Quimby | g g g | 0 | 0 | 17300 | 0 | - | - |
| 273-722 | 8-25 | A. Quimby | e e e | 0 | 0 | 4200 | 0 | - | - |
| Fishrack Bay | | | | | | | | | |
| 273-723 | 7- 8 | A. Quimby | E E E | 0 | 0 | 0 | 0 | - | - |
| 273-723 | 7-22 | A. Quimby | P P P | 0 | 0 | 0 | 0 | - | - |
| 273-723 | 7-31 | David Owen | E E E | 0 | 0 | 0 | 0 | 2000P | - |
| 273-723 | 8- 3 | A. Quimby | E E E | 0 | 0 | 0 | 0 | 50P | 300P |
| 273-723 | 8- 9 | A. Quimby | E E E | 0 | 0 | 0 | 0 | - | 5200P |
| 273-723 | 8-16 | A. Quimby | g g g | 0 | 0 | 800 | 0 | 3000P | - |
| 273-723 | 8-25 | A. Quimby | e e e | 0 | 0 | 3200 | 0 | - | 100P |
| Foot Bay | | | | | | | | | |
| 273-802 | 7- 8 | A. Quimby | E E E | 0 | 0 | 0 | 0 | - | - |
| 273-802 | 7-22 | A. Quimby | P P P | 0 | 0 | 0 | 0 | - | - |
| 273-802 | 7-31 | David Owen | E E E | 0 | 0 | 0 | 0 | 1000P | - |
| | | | | | | | | 50Ch | - |
| 273-802 | 8- 3 | A. Quimby | E E E | 0 | 0 | 0 | 0 | - | - |
| 273-802 | 8- 9 | A. Quimby | E E E | 0 | 0 | 400 | 0 | - | 1000P |
| 273-802 | 8-16 | A. Quimby | g g g | 0 | 0 | 1300 | 0 | - | - |
| 273-802 | 8-25 | A. Quimby | e e e | 0 | 0 | 6100 | 0 | - | - |
| Windy Bay | | | | | | | | | |
| 273-821 | 7- 8 | A. Quimby | E E E | 0 | 0 | 0 | 0 | - | - |
| 273-821 | 7-31 | David Owen | E E E | 0 | 0 | 0 | 0 | - | - |

-Continued-

Table 47. (page 7 of 9)

| Stream | Date MM-DD | Observer | Visibility | | | -----Fish in Stream----- | | | | Build Up Fish | | Observer Remarks |
|--------------------|---------------|------------|------------|-----|-----|--------------------------|------|------|------|---------------|--------|--------------------------|
| | | | Str | Mou | Bay | Reds | Coho | Pink | Chum | Mouth | Bay | |
| 273-821 | 8- 9 | A. Quimby | E | E | E | 0 | 0 | 0 | 0 | - | 100Ch | - |
| 273-821 | 8-16 | A. Quimby | g | g | g | 0 | 0 | 0 | 0 | 400Ch | - | - |
| 273-821 | 8-25 | A. Quimby | e | e | e | 0 | 0 | 500 | 0 | 600P | - | - |
| Windy Bay | | | | | | | | | | | | |
| 273-822 | 7- 8 | A. Quimby | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 273-822 | 7-31 | David Owen | E | E | E | 0 | 0 | 50 | 0 | - | - | RED TIDE |
| 273-822 | 8- 9 | A. Quimby | E | E | E | 0 | 0 | 0 | 0 | 300Ch | - | - |
| 273-822 | 8-16 | A. Quimby | g | g | g | 0 | 0 | 0 | 0 | - | - | - |
| 273-822 | 8-25 | A. Quimby | e | e | e | 0 | 0 | 0 | 100 | - | 100Ch | - |
| Spoon Creek | | | | | | | | | | | | |
| 273-823 | 7- 8 | A. Quimby | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 273-823 | 7-31 | David Owen | E | E | E | 0 | 0 | 0 | 300 | - | - | - |
| 273-823 | 8- 9 | A. Quimby | E | E | E | 0 | 0 | 300 | 0 | 200P | - | - |
| 273-823 | 8-16 | A. Quimby | g | g | g | 0 | 0 | 100 | 0 | - | - | - |
| 273-823 | 8-25 | A. Quimby | e | e | e | 0 | 0 | 300 | 0 | 250P | - | - |
| Portage Bay | | | | | | | | | | | | |
| 273-842 | 7- 8 | A. Quimby | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 273-842 | 7-22 | A. Quimby | P | P | P | 0 | 0 | 0 | 0 | - | - | NO SURVEY, SILTY STREAMS |
| 273-842 | 7-31 | David Owen | E | E | E | 0 | 0 | 0 | 500 | 1000Ch | 2000Ch | - |
| 273-842 | 8- 3 | A. Quimby | E | E | E | 0 | 0 | 0 | 0 | 3200Ch | - | - |
| 273-842 | 8- 9 | A. Quimby | E | E | E | 0 | 0 | 0 | 1100 | - | - | - |
| 273-842 | 8-16 | A. Quimby | g | g | g | 0 | 0 | 0 | 4200 | - | - | - |
| 273-842 | 8-25 | A. Quimby | e | e | e | 0 | 0 | 0 | 7200 | - | 1000Ch | - |
| Seal Bay | | | | | | | | | | | | |
| 273-843 | 7-31 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | CHUM JUMPERS IN THE BAY |
| 273-843 | 8- 9 | A. Quimby | E | E | E | 0 | 0 | 1000 | 0 | - | - | - |
| 273-843 | 8-16 | A. Quimby | g | g | g | 0 | 0 | 0 | 700 | 600Ch | - | - |
| Seal Bay | | | | | | | | | | | | |
| 273-844 | 7-31 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 273-844 | 8- 9 | A. Quimby | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 273-844 | 8-16 | A. Quimby | g | g | g | 0 | 0 | 0 | 0 | - | - | - |
| Dog Bay | | | | | | | | | | | | |
| 273-845 | 8- 9 | A. Quimby | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 273-845 | 8-16 | A. Quimby | g | g | g | 0 | 0 | 0 | 0 | - | - | - |
| Castle Bay | | | | | | | | | | | | |
| 273-941 | 7-16 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 273-941 | 7-31 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | 500P | - |

-Continued-

Table 47. (page 8 of 9)

| Stream | Date MM-DD | Observer | Visibility Str Mou Bay | -----Fish in Stream----- | | | | Build Up Fish Mouth Bay | Observer Remarks |
|----------------------------|---------------|------------|---------------------------|--------------------------|------|--------|-------|----------------------------|--|
| | | | | Reds | Coho | Pink | Chum | | |
| 275-400 | 7- 8 | A. Quimby | E E E | 0 | 0 | 0 | 0 | - - | - |
| Kupreanof Peninsula | | | | | | | | | |
| 275-401 | 7- 8 | A. Quimby | E E E | 0 | 0 | 0 | 0 | - - | - |
| 275-401 | 8- 3 | A. Quimby | E E E | 0 | 0 | 0 | 0 | - - | - |
| 275-401 | 8- 9 | A. Quimby | E E E | 0 | 0 | 10000 | 0 | 10000P - | - |
| Smokey Hollow Creek | | | | | | | | | |
| 275-402 | 7- 8 | A. Quimby | E E E | 0 | 0 | 0 | 100 | - - | - |
| 275-402 | 8- 3 | A. Quimby | G G G | 0 | 0 | 0 | 500 | 1000Ch - | - |
| 275-402 | 8- 9 | A. Quimby | E E E | 0 | 0 | 0 | 0 | 6000Ch - | - |
| 275-402 | 8-16 | A. Quimby | g g g | 0 | 0 | 0 | 7260 | - - | - |
| Ivanof Bay | | | | | | | | | |
| 275-403 | 7-31 | David Owen | E E E | 0 | 0 | 0 | 0 | - - | - |
| Wasco's Creek | | | | | | | | | |
| 275-404 | 7-22 | A. Quimby | G G G | 0 | 0 | 0 | 0 | - - | - |
| 275-404 | 7-31 | David Owen | E E E | 0 | 0 | 0 | 1000 | 3500Ch - | - |
| 275-404 | 8-16 | A. Quimby | g g g | 0 | 0 | 0 | 200 | - - | - |
| Sunnyside Creek | | | | | | | | | |
| 275-405 | 7-31 | David Owen | E E E | 0 | 0 | 0 | 0 | 3000Ch - | - |
| Ivanof River | | | | | | | | | |
| 275-406 | 7- 8 | A. Quimby | E E E | 0 | 0 | 0 | 0 | 350Ch - | - |
| 275-406 | 7-22 | A. Quimby | G G G | 0 | 0 | 0 | 200 | - - | - |
| 275-406 | 7-31 | David Owen | E E E | 0 | 0 | 3000 | 10000 | 2000Ch 500P 1000Ch - | - |
| 275-406 | 8- 3 | A. Quimby | G G G | 0 | 0 | 0 | 7700 | - - | Poor light conditions with chop in the bay |
| 275-406 | 8- 9 | A. Quimby | E E E | 0 | 0 | 29700 | 0 | 55000P - | - |
| 275-406 | 8-16 | A. Quimby | g g g | 0 | 0 | 80170 | 21000 | 150000P - | chop on water |
| 275-408 | 8- 9 | A. Quimby | E E E | 0 | 0 | 600 | 0 | 6000P - | - |
| Humpback Creek | | | | | | | | | |
| 275-502 | 7- 8 | A. Quimby | E E E | 0 | 0 | 0 | 0 | - - | - |
| 275-502 | 7-22 | A. Quimby | G G G | 0 | 0 | 600 | 0 | - 5000P - | - |
| 275-502 | 7-31 | David Owen | E E E | 0 | 0 | 4500 | 2000 | - 30000P - | - |
| 275-502 | 8- 3 | A. Quimby | E E E | 0 | 0 | 50000 | 0 | 1000P 5000P - | - |
| 275-502 | 8- 9 | A. Quimby | E E E | 0 | 0 | 121000 | 4800 | - 60000P - | - |
| 275-502 | 8-16 | A. Quimby | g g g | 0 | 0 | 123300 | 0 | 10000P - | - |

-Continued-

Table 47. (page 9 of 9)

| Stream | Date MM-DD | Observer | Visibility Str Mou Bay | | | -----Fish in Stream----- Reds Coho Pink Chum | | | | Build Up Fish Mouth Bay | | Observer Remarks |
|------------------|---------------|------------|---------------------------|---|---|---|---|-------|---|----------------------------|--------|------------------|
| Humpback Bay | | | | | | | | | | | | |
| 275-503 | 7- 8 | A. Quimby | E | E | E | 0 | 0 | 0 | 0 | 100P | - | - |
| 275-503 | 7-31 | David Owen | E | E | E | 0 | 0 | 0 | 0 | 3000P | - | - |
| Humpback Creek | | | | | | | | | | | | |
| 275-504 | 7- 8 | A. Quimby | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 275-504 | 7-31 | David Owen | E | E | E | 0 | 0 | 0 | 0 | 3000Ch | 1000Ch | - |
| 275-504 | 8- 9 | A. Quimby | E | E | E | 0 | 0 | 0 | 0 | 10000P | - | - |
| 275-504 | 8-16 | A. Quimby | g | g | g | 0 | 0 | 400 | 0 | 7000P | - | - |
| Humpback Bay | | | | | | | | | | | | |
| 275-505 | 7- 8 | A. Quimby | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| 275-505 | 7-22 | A. Quimby | G | G | G | 0 | 0 | 0 | 0 | 100P | - | - |
| 275-505 | 8- 9 | A. Quimby | E | E | E | 0 | 0 | 2500 | 0 | 10000P | - | - |
| 275-505 | 8-16 | A. Quimby | g | g | g | 0 | 0 | 10270 | 0 | - | - | - |
| 275-506 | 7- 8 | A. Quimby | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| Kametolook River | | | | | | | | | | | | |
| 275-600 | 7- 8 | A. Quimby | P | P | P | 0 | 0 | 0 | 0 | - | - | NO SURVEY, SILTY |
| 275-600 | 7-31 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - |
| Kametolook River | | | | | | | | | | | | |
| 275-601 | 7- 8 | A. Quimby | P | P | P | 0 | 0 | 0 | 0 | - | - | NO SURVEY, SILTY |
| 275-601 | 7-31 | David Owen | E | E | E | 0 | 0 | 0 | 0 | - | - | - |

Table 48. Pink and chum salmon escapement estimates for select Chignik Management Area streams, 1953-1993 (in thousands of fish).^{a,b}

| Year | Thompson Valley 272-204 | | Hook Bay 272-302 | | Cape Kumlik 272-501 | | Bear Cr. 272-505 | |
|------|----------------------------|------|---------------------|------|------------------------|------|---------------------|------|
| | Pink | Chum | Pink | Chum | Pink | Chum | Pink | Chum |
| 1953 | 25.3 | 0.0 | 13.0 | 6.3 | | | 0.0 | 0.7 |
| 1954 | 28.2 | 4.5 | 14.3 | 5.3 | | | 0.2 | 0.2 |
| 1955 | 115.0 | 3.0 | 78.0 | 0.0 | | | 1.0 | 0.0 |
| 1956 | | | | | | | | |
| 1957 | | | | | | | | |
| 1958 | | | | | | | | |
| 1959 | | | | | | | | |
| 1960 | | | | | | | | |
| 1961 | | | | | | | | |
| 1962 | 7.0 | 0.0 | 18.9 | 4.1 | 7.0 | 0.0 | 0.0 | 12.4 |
| 1963 | 23.3 | 0.0 | 33.0 | 7.5 | 23.0 | 0.0 | 0.0 | 9.5 |
| 1964 | 4.1 | 0.0 | 42.0 | 1.2 | 8.7 | 0.0 | 0.0 | 8.8 |
| 1965 | 9.4 | 0.0 | 23.3 | 2.1 | 13.7 | 0.0 | 0.0 | 8.5 |
| 1966 | 4.1 | 0.0 | 10.0 | 0.5 | 3.8 | 0.0 | 0.0 | 4.3 |
| 1967 | 2.0 | 0.4 | 7.3 | 2.5 | 5.2 | 0.0 | 0.0 | 8.0 |
| 1968 | | | 5.0 | 0.0 | | | 0.0 | 2.7 |
| 1969 | 19.0 | 0.0 | 30.0 | 0.0 | | | 0.0 | 4.5 |
| 1970 | 12.0 | 0.0 | 11.0 | 1.0 | 5.0 | 0.0 | 0.0 | 10.0 |
| 1971 | 7.5 | 0.0 | 13.0 | 8.0 | 51.0 | 0.0 | 0.0 | 10.0 |
| 1972 | 0.2 | 0.0 | 0.4 | 1.1 | 0.2 | 0.0 | 0.0 | 2.5 |
| 1973 | 2.3 | 0.2 | 4.9 | 4.7 | 40.0 | 0.0 | 0.0 | 4.0 |
| 1974 | 1.6 | 0.1 | 3.8 | 0.8 | 0.6 | 0.0 | 0.0 | 2.3 |
| 1975 | 10.2 | 0.0 | 1.3 | 6.0 | 17.8 | 0.0 | 0.0 | 1.5 |
| 1976 | 5.5 | 0.2 | 8.0 | 2.5 | 2.6 | 0.0 | 0.0 | 1.4 |
| 1977 | 29.4 | 0.0 | 22.6 | 2.0 | 124.0 | 0.0 | 0.5 | 2.6 |
| 1978 | 14.0 | 0.0 | 14.5 | 2.8 | 6.1 | 0.0 | 0.1 | 1.5 |
| 1979 | 35.5 | 1.0 | 42.7 | 11.0 | 153.0 | 0.0 | 0.0 | 5.0 |
| 1980 | 0.7 | 0.0 | 24.5 | 4.2 | 2.6 | 0.0 | 0.2 | 0.0 |
| 1981 | 6.5 | 0.5 | 13.9 | 9.0 | 36.2 | 0.0 | 0.1 | 0.0 |
| 1982 | 1.2 | 0.0 | 7.3 | 10.0 | 0.9 | 0.0 | 0.0 | 2.5 |
| 1983 | 2.3 | 0.0 | 0.2 | 0.3 | 0.0 | 0.0 | 2.0 | 7.9 |
| 1984 | 14.0 | 0.0 | 16.2 | 0.1 | 3.7 | 0.0 | 0.3 | 2.3 |
| 1985 | 0.0 | 0.0 | 2.0 | 0.0 | | | 0.0 | 7.2 |
| 1986 | 0.3 | 0.0 | 66.9 | 0.0 | 38.2 | 0.0 | 0.0 | 7.5 |
| 1987 | | | 9.5 | 0.3 | 46.9 | 0.3 | 0.0 | 12.0 |
| 1988 | 9.6 | 3.3 | 26.4 | 0.7 | 18.0 | 0.0 | 0.0 | 0.7 |
| 1989 | 16.6 | 3.7 | 45.5 | 10.2 | 63.0 | 0.0 | 0.0 | 3.6 |
| 1990 | 4.8 | 0.0 | 16.7 | 0.2 | 3.2 | 0.0 | 0.3 | T |
| 1991 | 0.0 | 0.0 | 0.0 | 0.0 | 109.7 | 0.0 | 0.0 | .9 |
| 1992 | 61.2 | 0.0 | 7.2 | 7.5 | 15.4 | 0.0 | 0.0 | 20.8 |
| 1993 | 0.0 | 19.0 | 26.2 | 9.3 | 82.0 | 0.0 | 0.0 | 1.4 |

-Continued-

Table 48. (page 2 of 8)

| | Rudys Cr. 272-509 | | North Fork 272-514 | | Aniakchak R. 272-605 | | Cape Agutka 272-606 | |
|------|----------------------|------|-----------------------|------|-------------------------|------|------------------------|------|
| Year | Pink | Chum | Pink | Chum | Pink | Chum | Pink | Chum |
| 1953 | 0.7 | 0.2 | 1.3 | 3.5 | 0.0 | 35.0 | 0.2 | 0.7 |
| 1954 | | | 55.0 | 4.6 | 100.0 | 37.2 | 3.9 | 1.5 |
| 1955 | 15.0 | 4.0 | 13.5 | 1.0 | 16.0 | 0.0 | 1.2 | 0.0 |
| 1956 | | | | | | | | |
| 1957 | | | | | | | | |
| 1958 | | | | | | | | |
| 1959 | | | | | | | | |
| 1960 | | | | | | | | |
| 1961 | | | | | | | | |
| 1962 | 4.5 | 5.2 | 34.0 | 0.8 | 126.0 | 25.0 | 17.6 | 0.5 |
| 1963 | 0.0 | 12.0 | 9.7 | 1.8 | 6.0 | 14.6 | 0.4 | 0.0 |
| 1964 | 0.5 | 5.0 | 68.0 | 3.0 | 175.0 | 82.5 | 11.0 | 1.1 |
| 1965 | 0.0 | 1.1 | 8.7 | 2.0 | 10.8 | 4.0 | 5.1 | 0.1 |
| 1966 | 2.0 | 3.0 | 2.0 | | 90.8 | 9.0 | 7.7 | 0.2 |
| 1967 | 1.0 | 3.0 | 20.0 | 1.1 | 2.0 | 10.5 | 1.1 | 0.1 |
| 1968 | 2.0 | 7.0 | 26.0 | 0.0 | 85.0 | 10.0 | 22.3 | 0.0 |
| 1969 | 0.2 | 1.0 | 5.2 | 4.0 | 0.1 | 0.5 | 4.6 | 2.0 |
| 1970 | 0.0 | 3.0 | 24.0 | 8.0 | 40.0 | 30.5 | 10.0 | 2.0 |
| 1971 | 0.0 | 1.3 | 0.0 | 4.5 | 0.0 | 11.5 | 2.0 | 3.0 |
| 1972 | 0.2 | 1.7 | 1.7 | 6.9 | 1.8 | 7.1 | 2.5 | 1.5 |
| 1973 | 0.0 | 1.2 | 2.8 | 1.5 | 2.7 | 4.0 | 1.5 | 1.8 |
| 1974 | 0.8 | 4.2 | 2.5 | 4.2 | 29.8 | 25.7 | 1.6 | 0.0 |
| 1975 | 0.0 | 1.8 | 0.4 | 3.7 | 2.4 | 5.5 | 1.9 | 0.2 |
| 1976 | 6.2 | 3.7 | 17.5 | 7.9 | 165.0 | 34.0 | 5.9 | 0.8 |
| 1977 | 6.3 | 0.9 | 6.6 | 2.3 | 3.0 | 14.8 | 1.0 | 0.1 |
| 1978 | 4.0 | 2.2 | 46.0 | 6.9 | 215.5 | 23.2 | 8.0 | 0.2 |
| 1979 | 12.0 | 7.7 | 12.7 | 5.6 | 0.0 | 0.2 | 13.0 | 1.5 |
| 1980 | 9.3 | 0.0 | 38.5 | 29.5 | 40.0 | 43.0 | 20.0 | 5.5 |
| 1981 | 0.7 | 0.1 | 15.8 | 16.5 | 2.7 | 32.0 | 5.8 | 0.0 |
| 1982 | 0.2 | 8.7 | 19.0 | 3.5 | 130.0 | 47.0 | 21.0 | 0.0 |
| 1983 | 0.0 | 1.3 | 4.1 | 1.3 | 1.0 | 3.1 | 0.1 | 0.0 |
| 1984 | 4.5 | 5.0 | 32.4 | 17.4 | 56.4 | 47.0 | 17.2 | 1.2 |
| 1985 | 0.0 | 0.0 | 4.7 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1986 | 38.0 | 10.9 | 34.3 | 5.0 | 1.5 | 0.5 | 65.0 | 0.4 |
| 1987 | 0.0 | 0.0 | 8.8 | 4.0 | 2.5 | 0.3 | 4.2 | 0.3 |
| 1988 | 34.9 | 16.6 | 48.5 | 17.0 | 95.1 | 17.4 | 84.4 | 0.0 |
| 1989 | 7.3 | 0.4 | 23.0 | 1.2 | 5.0 | 2.5 | 1.8 | 0.0 |
| 1990 | 8.0 | 1.3 | 40.9 | .7 | 19.7 | 11.6 | 46.5 | 0.0 |
| 1991 | 0.0 | 7.4 | 2.1 | 2.9 | 0.0 | 7.6 | 4.1 | 0.0 |
| 1992 | 15.0 | 48.2 | 42.3 | 59.7 | 96.6 | 53.8 | 161.9 | 16.8 |
| 1993 | 3.7 | 0.0 | 24.5 | 8.0 | 0.0 | 7.8 | 53.0 | T |

-Continued-

Table 48. (page 3 of 8)

| Year | Main Cr. 272-702 | | Northeast Cr. 272-703 | | Yantarni Cr. 272-721 | | Ocean Beach 272-801 | |
|------|---------------------|------|--------------------------|------|-------------------------|------|------------------------|------|
| | Pink | Chum | Pink | Chum | Pink | Chum | Pink | Chum |
| 1953 | 0.2 | 17.0 | 3.5 | 2.0 | | | | |
| 1954 | 6.9 | 21.5 | 1.1 | 0.8 | | | | |
| 1955 | 25.2 | 0.8 | | | 7.5 | 7.0 | 8.0 | 3.0 |
| 1956 | | | | | | | | |
| 1957 | | | | | | | | |
| 1958 | | | | | | | | |
| 1959 | | | | | | | | |
| 1960 | | | | | | | | |
| 1961 | | | | | | | | |
| 1962 | 33.0 | 3.6 | 1.6 | 2.5 | 52.5 | 0.1 | 45.0 | 2.0 |
| 1963 | 16.0 | 5.8 | 5.0 | 0.9 | 16.0 | 0.3 | 3.4 | 0.0 |
| 1964 | 40.5 | | 2.3 | 3.0 | 42.0 | 21.0 | 34.6 | 10.1 |
| 1965 | 5.0 | 4.8 | 2.3 | 6.0 | 4.0 | 7.6 | 0.4 | 1.0 |
| 1966 | 3.0 | 0.0 | 1.3 | 0.2 | 18.5 | 5.0 | 11.0 | 3.3 |
| 1967 | 16.5 | 2.0 | 2.0 | 0.2 | | | | |
| 1968 | 28.0 | 8.0 | 7.7 | 1.0 | 25.0 | 6.5 | 26.5 | 0.0 |
| 1969 | 3.0 | 15.0 | 7.0 | 4.5 | 1.5 | 11.0 | 6.0 | 3.5 |
| 1970 | 13.0 | 7.0 | 7.0 | 6.0 | 1.5 | 11.5 | 7.5 | 5.0 |
| 1971 | 1.0 | 20.0 | 2.0 | 5.5 | 0.0 | 18.0 | 0.0 | 3.5 |
| 1972 | 2.0 | 8.0 | 1.7 | 0.5 | 2.1 | 21.0 | 0.5 | 4.6 |
| 1973 | 1.0 | 7.0 | 1.1 | 3.1 | 0.3 | 6.5 | 0.6 | 1.7 |
| 1974 | 6.6 | 6.3 | 3.0 | 2.0 | 3.7 | 3.8 | 2.3 | 2.2 |
| 1975 | 4.7 | 8.0 | 0.4 | 0.7 | 0.3 | 1.6 | 0.8 | 0.2 |
| 1976 | 5.5 | 8.5 | 3.8 | 2.0 | 5.8 | 12.5 | 4.2 | 3.0 |
| 1977 | 4.5 | 3.5 | 10.0 | 0.8 | 1.9 | 3.5 | 1.1 | 0.4 |
| 1978 | 5.6 | 7.6 | 4.4 | 4.6 | 7.9 | 3.3 | 7.1 | 0.5 |
| 1979 | 13.5 | 14.0 | 7.0 | 7.5 | 14.0 | 9.5 | 1.5 | 0.0 |
| 1980 | 53.5 | 17.0 | 4.8 | 3.0 | 60.0 | 11.0 | 27.6 | 0.0 |
| 1981 | 6.3 | 16.3 | 5.9 | 2.5 | 13.5 | 18.2 | 10.5 | 5.5 |
| 1982 | 36.0 | 12.3 | 6.2 | 3.7 | 8.5 | 25.5 | 0.0 | 14.5 |
| 1983 | 9.2 | 6.7 | 3.2 | 4.7 | 3.6 | 13.4 | 3.1 | 1.5 |
| 1984 | 15.7 | 14.5 | 7.0 | 4.3 | 26.5 | 18.7 | 19.0 | 13.2 |
| 1985 | 13.7 | 4.0 | 9.0 | 0.0 | 67.8 | 0.7 | 9.9 | 0.0 |
| 1986 | 85.0 | 0.0 | 13.6 | 0.0 | 3.1 | 0.3 | 1.8 | 0.2 |
| 1987 | 14.3 | 1.5 | 7.5 | 0.4 | 18.0 | 3.0 | 13.0 | 2.7 |
| 1988 | 43.6 | 5.5 | 41.4 | 10.6 | 33.7 | 30.3 | 32.8 | 12.8 |
| 1989 | 53.0 | 3.2 | 17.0 | 4.0 | 10.9 | 3.4 | 10.9 | 4.8 |
| 1990 | 54.3 | 5.7 | 80.3 | 13.3 | 23.6 | 9.3 | 45.0 | 1.3 |
| 1991 | 0.0 | 8.4 | 1.9 | 8.8 | 5.3 | 1.7 | 0.0 | 2.8 |
| 1992 | 30.3 | 45.2 | 31.9 | 50.5 | 14.9 | 26.2 | 15.6 | 7.1 |
| 1993 | 26.5 | 14.0 | 24.2 | 0.0 | | | 10.0 | 23.0 |

-Continued-

Table 48. (page 4 of 8)

| Year | Nakalilok R. 272-804 | | Chiginagak 272-902 | | Chiginagak R. 272-903 | | Chiginagak 272-904 | |
|------|-------------------------|------|-----------------------|------|--------------------------|------|-----------------------|------|
| | Pink | Chum | Pink | Chum | Pink | Chum | Pink | Chum |
| 1953 | | | | | | | | |
| 1954 | | | | | | | | |
| 1955 | 3.0 | 0.5 | | | 0.0 | 15.9 | | |
| 1956 | | | | | | | | |
| 1957 | | | | | | | | |
| 1958 | | | | | | | | |
| 1959 | | | | | | | | |
| 1960 | | | | | | | | |
| 1961 | | | | | | | | |
| 1962 | 22.0 | 0.1 | 16.0 | 0.0 | 0.3 | 34.3 | 20.1 | 0.0 |
| 1963 | 10.4 | 0.1 | 1.2 | 0.0 | 0.0 | 15.0 | 43.0 | 0.0 |
| 1964 | 89.0 | 3.0 | 20.0 | 0.0 | 6.0 | 24.4 | 41.4 | 0.0 |
| 1965 | 0.5 | 9.0 | 0.4 | 0.0 | 0.0 | 13.8 | 12.4 | 0.1 |
| 1966 | 12.5 | 0.0 | 5.8 | 0.0 | 0.0 | 33.2 | 16.0 | 0.0 |
| 1967 | 3.5 | 18.5 | 0.5 | 0.1 | 0.0 | 27.0 | 12.4 | 0.0 |
| 1968 | 7.4 | 2.0 | 21.0 | 0.0 | 2.0 | 29.5 | 20.0 | 0.0 |
| 1969 | 8.0 | 3.5 | 1.3 | 0.0 | | 20.0 | 6.0 | 0.0 |
| 1970 | 10.0 | 6.5 | 11.0 | 0.0 | 0.0 | 31.0 | 4.0 | 0.0 |
| 1971 | 1.0 | 44.0 | 2.8 | 0.0 | 0.0 | 86.0 | 1.1 | 0.0 |
| 1972 | 0.0 | 6.0 | 0.1 | 0.3 | 1.0 | 33.0 | 0.1 | 0.1 |
| 1973 | 0.5 | 5.2 | 0.3 | 0.0 | 0.2 | 28.3 | 0.5 | 0.0 |
| 1974 | 2.2 | 4.8 | 0.2 | 0.2 | 8.5 | 28.5 | 0.9 | 0.0 |
| 1975 | 3.0 | 4.8 | 0.5 | 0.5 | 2.9 | 20.3 | 0.8 | 0.0 |
| 1976 | 2.4 | 14.2 | 0.7 | 0.0 | 0.7 | 35.0 | 2.2 | 0.0 |
| 1977 | 3.8 | 4.9 | 2.7 | 0.0 | 1.8 | 19.4 | 3.8 | 0.0 |
| 1978 | 8.1 | 4.2 | 4.4 | 0.4 | 1.3 | 9.1 | 3.5 | 0.0 |
| 1979 | 12.0 | 2.9 | 11.0 | 15.0 | 0.4 | 24.3 | 7.2 | 0.0 |
| 1980 | 25.6 | 14.0 | 17.9 | 0.0 | 16.3 | 5.7 | 14.5 | 0.0 |
| 1981 | 6.5 | 8.0 | 5.0 | 0.0 | 6.0 | 23.4 | 6.9 | 0.0 |
| 1982 | 4.0 | 12.3 | 2.2 | 0.0 | 2.0 | 18.5 | 1.7 | 0.4 |
| 1983 | 4.8 | 4.2 | 0.7 | 0.0 | 1.8 | 9.6 | 1.9 | 0.0 |
| 1984 | 15.0 | 36.5 | 16.6 | 0.0 | 6.9 | 53.8 | 19.5 | 3.0 |
| 1985 | 27.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 5.0 | 0.0 |
| 1986 | 12.7 | 1.0 | 42.3 | 0.0 | 21.1 | 3.3 | 8.9 | 0.0 |
| 1987 | 1.4 | 3.8 | 3.2 | 0.4 | 67.5 | 15.7 | 11.0 | 3.3 |
| 1988 | 16.8 | 8.0 | 33.7 | 0.0 | 12.6 | 13.2 | 40.0 | 30.0 |
| 1989 | 10.6 | 4.1 | 22.0 | 0.0 | 70.4 | 4.2 | 32.0 | 11.5 |
| 1990 | 47.0 | 6.3 | 19.2 | 0.0 | 63.0 | 9.8 | 18.7 | 5.0 |
| 1991 | 0.0 | 4.1 | 18.6 | 0.0 | 0.3 | 0.0 | 0.5 | 5.5 |
| 1992 | 16.7 | 27.3 | 27.6 | 0.6 | 0.0 | 4.5 | 0.1 | 0.0 |
| 1993 | 30.0 | 33.0 | 35.3 | 0.0 | 59.8 | 10.0 | 59.3 | 10.0 |

-Continued-

Table 48. (page 5 of 8)

| Year | Chiginagak 272-905 | | Agripina R. 272-961 | | Glacier Cr. 272-962 | | Kilokak 272-963 | |
|------|-----------------------|------|------------------------|------|------------------------|------|--------------------|------|
| | Pink | Chum | Pink | Chum | Pink | Chum | Pink | Chum |
| 1953 | | | | | | | | |
| 1954 | | | | | | | | |
| 1955 | | | | | 0.0 | 0.0 | | |
| 1956 | | | | | | | | |
| 1957 | | | | | | | | |
| 1958 | | | | | | | | |
| 1959 | | | | | | | | |
| 1960 | | | | | | | | |
| 1961 | | | | | | | | |
| 1962 | 17.1 | 0.0 | 12.0 | 3.0 | 0.5 | 3.0 | 16.2 | 0.0 |
| 1963 | 1.0 | 0.0 | 19.2 | 0.1 | 0.0 | 10.0 | 0.8 | 0.0 |
| 1964 | 100.0 | 0.3 | 8.5 | 0.0 | 0.5 | 6.0 | 14.2 | 0.0 |
| 1965 | 1.2 | 0.0 | 20.1 | 0.0 | 0.0 | 1.3 | 0.1 | 0.0 |
| 1966 | 90.5 | 0.0 | | | | | 24.5 | 0.0 |
| 1967 | 5.8 | 1.8 | 7.3 | 0.5 | 0.0 | 5.6 | 0.3 | 0.0 |
| 1968 | 53.0 | 0.0 | 12.0 | 0.0 | 0.0 | 0.2 | 65.6 | 0.0 |
| 1969 | 2.4 | 0.0 | 2.5 | 0.0 | 0.0 | 2.0 | 0.2 | 0.0 |
| 1970 | 24.0 | 0.0 | 15.5 | 0.0 | 0.0 | 5.0 | 55.0 | 0.0 |
| 1971 | 4.3 | 2.0 | 6.6 | 0.0 | 0.0 | 6.0 | 0.0 | 0.0 |
| 1972 | 2.4 | 0.0 | 1.6 | 0.0 | 0.0 | 4.6 | 2.1 | 0.0 |
| 1973 | 1.0 | 0.0 | 4.2 | 0.5 | 0.0 | 3.0 | 0.1 | 0.0 |
| 1974 | 1.9 | 0.0 | 1.2 | 0.2 | 0.0 | 0.9 | 0.3 | 0.0 |
| 1975 | 2.1 | 0.2 | 2.7 | 0.0 | 0.2 | 0.5 | 0.6 | 0.0 |
| 1976 | 20.1 | 0.4 | 4.9 | 0.0 | 0.0 | 1.8 | 4.9 | 0.0 |
| 1977 | 22.0 | 1.3 | 4.3 | 0.0 | 0.0 | 1.0 | 0.5 | 0.0 |
| 1978 | 41.0 | 0.4 | 7.4 | 0.1 | 0.6 | 1.1 | 5.9 | 0.0 |
| 1979 | 61.1 | 0.0 | 23.5 | 0.0 | 0.0 | 1.6 | 1.1 | 0.0 |
| 1980 | 38.5 | 0.0 | 14.3 | 0.0 | 5.2 | 0.7 | 61.0 | 0.0 |
| 1981 | 48.0 | 0.1 | 13.4 | 0.0 | 0.0 | 0.6 | 0.3 | 0.0 |
| 1982 | 34.1 | 0.0 | 33.0 | 0.0 | 0.0 | 1.1 | 20.0 | 0.0 |
| 1983 | 3.6 | 5.0 | 5.0 | 0.0 | 1.3 | 0.2 | 0.3 | 0.0 |
| 1984 | 117.2 | 0.2 | 39.8 | 0.0 | 1.0 | 3.2 | 75.8 | 0.0 |
| 1985 | 17.0 | 0.0 | 10.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1986 | 85.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 175.0 | 0.0 |
| 1987 | 20.0 | 0.3 | 1.0 | 0.0 | 6.2 | 0.0 | 0.0 | 0.0 |
| 1988 | 52.9 | 14.4 | 78.0 | 20.6 | 0.3 | 0.0 | 137.8 | 0.0 |
| 1989 | 89.0 | 4.0 | 53.0 | 0.0 | 0.3 | 0.1 | 10.5 | 0.0 |
| 1990 | 84.8 | 2.4 | 33.3 | 0.0 | 1.1 | 0.2 | 83.4 | 0.0 |
| 1991 | 5.2 | 5.0 | 9.6 | 5.0 | .2 | 1.2 | 9.7 | 0.0 |
| 1992 | 137.8 | 5.1 | 180.5 | 5.7 | 10.4 | 0.0 | 157.8 | 0.0 |
| 1993 | 87.3 | 10.0 | 47.2 | 0.0 | 0.0 | 0.0 | 105.7 | 0.0 |

-Continued-

Table 48. (page 6 of 8)

| Year | Coal Cape 273-702 | | Ivan River 273-722 | | Foot Bay 273-802 | | Spoon Cr. 273-823 | |
|------|----------------------|------|-----------------------|------|---------------------|------|----------------------|------|
| | Pink | Chum | Pink | Chum | Pink | Chum | Pink | Chum |
| 1953 | | | | | | | 1.0 | 1.5 |
| 1954 | | | | | | | | |
| 1955 | | | | | | | 15.0 | 0.0 |
| 1956 | | | | | | | | |
| 1957 | | | | | | | | |
| 1958 | | | | | | | | |
| 1959 | | | | | | | | |
| 1960 | | | | | | | | |
| 1961 | | | | | | | | |
| 1962 | 129.0 | 12.0 | 85.0 | 36.0 | 13.3 | 1.0 | 10.6 | 2.0 |
| 1963 | 127.5 | 0.0 | 124.0 | 4.5 | 11.0 | 1.0 | 3.5 | 0.0 |
| 1964 | 60.0 | 10.0 | 65.5 | | 12.0 | 0.9 | 13.2 | 0.0 |
| 1965 | 48.0 | 5.9 | 89.1 | 0.0 | 5.3 | 0.0 | 1.4 | 0.0 |
| 1966 | 9.7 | 2.0 | 94.5 | 1.0 | 18.4 | 0.2 | 15.5 | 0.0 |
| 1967 | 9.0 | 1.0 | 35.0 | 7.0 | 4.7 | 0.0 | 2.4 | 0.0 |
| 1968 | 39.0 | | 85.0 | 0.0 | 14.2 | 0.0 | 7.8 | 0.0 |
| 1969 | 77.0 | 0.0 | 302.0 | 0.0 | 14.2 | 0.1 | 6.5 | 0.0 |
| 1970 | 69.0 | 0.0 | 103.0 | 17.0 | 14.5 | 3.0 | 10.5 | 0.0 |
| 1971 | 8.0 | 0.0 | 205.0 | 90.0 | 30.0 | 5.2 | 7.0 | 0.0 |
| 1972 | 2.5 | 4.5 | 4.4 | 13.0 | 0.6 | 0.6 | 0.2 | 0.0 |
| 1973 | 1.6 | 1.0 | 43.8 | 17.2 | 7.5 | 0.3 | 0.8 | 0.2 |
| 1974 | 62.8 | 5.1 | 3.9 | 22.3 | 2.1 | 0.3 | 1.7 | 0.0 |
| 1975 | 21.0 | 4.5 | 96.0 | 24.5 | 9.8 | 0.0 | 4.5 | 0.0 |
| 1976 | 70.3 | 13.4 | 17.3 | 22.1 | 7.0 | 1.1 | 9.3 | 1.9 |
| 1977 | 78.5 | 0.0 | 236.0 | 36.0 | 18.3 | 0.8 | 5.7 | 0.1 |
| 1978 | 218.5 | 0.1 | 73.7 | 0.8 | 16.6 | 2.0 | 7.5 | 0.1 |
| 1979 | 50.2 | 2.0 | 90.0 | 32.0 | 9.6 | 0.4 | 7.1 | 1.0 |
| 1980 | 53.0 | 12.5 | 51.0 | 22.1 | 3.5 | 1.0 | 4.5 | 0.9 |
| 1981 | 84.9 | 3.0 | 117.0 | 28.0 | 10.0 | 4.6 | 6.7 | 0.8 |
| 1982 | 30.5 | 3.3 | 21.0 | 16.3 | 1.4 | 2.8 | 0.1 | 0.4 |
| 1983 | 17.8 | 0.5 | 12.2 | 7.2 | 1.2 | 1.1 | 0.8 | 0.0 |
| 1984 | 60.2 | 6.5 | 103.0 | 40.0 | 6.0 | 1.8 | 0.3 | 0.1 |
| 1985 | 3.5 | 0.5 | 49.6 | 23.3 | 5.9 | 1.7 | 0.3 | 0.0 |
| 1986 | 22.0 | 0.0 | 10.1 | 0.0 | 4.9 | 0.0 | 0.5 | 0.0 |
| 1987 | 13.4 | 0.4 | 14.8 | 2.4 | 6.6 | 1.0 | 0.0 | 0.0 |
| 1988 | 135.6 | 10.6 | 57.0 | 5.6 | 13.0 | 0.9 | 3.1 | 0.3 |
| 1989 | 2.9 | 1.5 | 32.0 | 0.8 | 10.8 | 0.6 | 1.7 | 0.1 |
| 1990 | 7.5 | 0.8 | 23.1 | 14.3 | 8.2 | 0.2 | 0.8 | 2.0 |
| 1991 | 53.6 | 0.0 | 42.2 | 3.1 | 0.0 | 4.9 | 0.0 | 1.7 |
| 1992 | 0.0 | 0.3 | 31.4 | 45.1 | 1.1 | 0.0 | 0.8 | 0.2 |
| 1993 | 16.1 | 0.0 | 17.3 | 1.7 | 6.1 | 0.0 | 0.3 | 0.3 |

-Continued-

Table 48. (page 7 of 8)

| Year | Portage 273-842 | | Seal Bay 273-843 | | Kupreanof 275-401 | | Smokey Hollow 275-402 | |
|------|--------------------|------|---------------------|------|----------------------|------|--------------------------|------|
| | Pink | Chum | Pink | Chum | Pink | Chum | Pink | Chum |
| 1953 | 5.3 | 0.5 | 2.0 | 2.0 | | | | |
| 1954 | | | | | | | | |
| 1955 | 0.0 | 20.0 | 0.0 | 0.6 | | | | |
| 1956 | | | | | | | | |
| 1957 | | | | | | | | |
| 1958 | | | | | | | | |
| 1959 | | | | | | | | |
| 1960 | | | | | | | | |
| 1961 | | | | | | | | |
| 1962 | 0.0 | 23.8 | 0.0 | 1.8 | 12.2 | 0.0 | 3.6 | 3.9 |
| 1963 | 27.0 | 4.4 | 6.0 | 0.0 | 3.5 | 0.0 | 1.5 | 2.0 |
| 1964 | 0.0 | 20.4 | 1.3 | 0.0 | 13.0 | 1.1 | 0.8 | 17.0 |
| 1965 | 1.7 | 8.3 | 3.3 | 0.0 | 3.0 | 0.0 | 0.0 | 0.5 |
| 1966 | 24.4 | 8.9 | 4.0 | 0.0 | | | 0.0 | 7.4 |
| 1967 | 28.5 | 15.0 | 6.0 | 0.5 | 6.7 | 0.0 | 0.0 | 0.3 |
| 1968 | 3.3 | 5.0 | 2.5 | 0.0 | 14.0 | 0.0 | 0.0 | 0.9 |
| 1969 | 0.1 | 27.5 | 7.5 | 0.0 | 6.8 | 0.2 | 0.0 | 0.2 |
| 1970 | 9.0 | 27.6 | 5.2 | 0.0 | 11.0 | 0.0 | 0.0 | 2.5 |
| 1971 | 10.2 | 60.1 | 5.0 | 10.1 | 3.5 | 0.0 | 0.0 | 1.5 |
| 1972 | 0.1 | 21.4 | 0.0 | 11.1 | 1.0 | 0.5 | 0.0 | 2.0 |
| 1973 | 2.9 | 18.1 | 2.0 | 0.1 | 0.2 | 0.5 | 0.2 | 0.6 |
| 1974 | 0.0 | 8.7 | 1.2 | 1.0 | 1.2 | 0.5 | 0.4 | 0.8 |
| 1975 | 0.4 | 9.2 | 5.3 | 2.3 | 1.0 | 0.1 | 0.1 | 0.1 |
| 1976 | 0.9 | 8.5 | 0.6 | 4.6 | 4.0 | 0.0 | 0.6 | 0.8 |
| 1977 | 5.0 | 20.5 | 3.1 | 5.2 | 5.1 | 0.0 | 2.3 | 1.6 |
| 1978 | 4.1 | 19.0 | 1.5 | 1.4 | 16.1 | 0.0 | 0.5 | 0.5 |
| 1979 | 17.7 | 4.5 | 0.2 | 0.6 | 28.0 | 0.0 | 0.6 | 0.4 |
| 1980 | 10.2 | 18.5 | 1.0 | 0.5 | 11.6 | 0.0 | 0.5 | 0.3 |
| 1981 | 6.5 | 33.3 | 9.0 | 0.0 | 22.5 | 0.1 | 1.5 | 0.0 |
| 1982 | 0.0 | 6.3 | 0.0 | 3.5 | 5.5 | 0.0 | 0.0 | 0.0 |
| 1983 | 0.3 | 7.3 | 0.8 | 0.0 | 3.5 | 0.0 | 0.2 | 2.6 |
| 1984 | 1.0 | 14.6 | 4.6 | 5.5 | 5.2 | 0.0 | 0.3 | 1.4 |
| 1985 | 0.0 | 9.1 | 7.3 | 0.0 | | | 0.2 | 0.0 |
| 1986 | 0.7 | 5.0 | 0.0 | 0.1 | | | 0.5 | 0.1 |
| 1987 | 0.0 | 10.2 | 0.5 | 3.9 | | | 1.4 | 0.1 |
| 1988 | 4.0 | 6.1 | 0.0 | 0.8 | 5.1 | 0.0 | 0.9 | 1.0 |
| 1989 | 1.2 | 1.6 | 1.7 | 0.8 | 4.2 | 0.1 | 9.4 | 0.1 |
| 1990 | 0.9 | 8.9 | 0.0 | 2.2 | 13.5 | 0.0 | 1.3 | 1.5 |
| 1991 | 0.0 | 22.0 | 0.0 | 3.4 | 7.1 | 0.0 | 0.0 | 10.0 |
| 1992 | 2.5 | 5.3 | 1.5 | 2.0 | 28.8 | 0.0 | 1.2 | 0.8 |
| 1993 | 0.0 | 10.6 | 1.0 | 1.3 | 10.0 | 0.0 | 0.0 | 7.3 |

-Continued-

Table 48. (page 8 of 8)

| Year | Wasco's Creek 275-404 | | Ivanof River 275-406 | | Humpback Cr. 275-502 | |
|------|--------------------------|------|-------------------------|-------|-------------------------|------|
| | Pink | Chum | Pink | Chum | Pink | Chum |
| 1953 | | | | | | |
| 1954 | | | | | | |
| 1955 | | | | | | |
| 1956 | | | | | | |
| 1957 | | | | | | |
| 1958 | | | | | | |
| 1959 | | | | | | |
| 1960 | | | | | | |
| 1961 | | | | | | |
| 1962 | 23.0 | 0.0 | 48.5 | 2.5 | 64.5 | 3.0 |
| 1963 | 1.0 | 0.0 | 128.0 | 4.0 | 26.4 | 0.4 |
| 1964 | 0.0 | 6.5 | 15.0 | 0.8 | 40.7 | 0.2 |
| 1965 | 2.0 | 0.0 | 61.4 | 5.5 | 13.8 | 0.0 |
| 1966 | 10.5 | 0.0 | 39.5 | 9.0 | 30.0 | 0.0 |
| 1967 | 2.0 | 0.0 | 98.5 | 3.0 | 36.7 | 0.0 |
| 1968 | 0.3 | 0.0 | 60.0 | 0.5 | 52.3 | 0.0 |
| 1969 | 4.0 | 0.0 | 122.4 | 0.5 | 75.0 | 0.0 |
| 1970 | 2.5 | 0.0 | 51.0 | 10.0 | 31.0 | 0.0 |
| 1971 | 3.0 | 4.0 | 25.0 | 21.0 | 13.4 | 1.5 |
| 1972 | 0.3 | 0.0 | 6.3 | 7.8 | 0.5 | 1.0 |
| 1973 | 0.0 | 0.0 | 24.7 | 8.2 | 6.1 | 0.6 |
| 1974 | 6.3 | 1.9 | 41.9 | 8.1 | 10.2 | 0.7 |
| 1975 | 0.9 | 0.0 | 33.4 | 15.0 | 9.2 | 3.5 |
| 1976 | 6.2 | 0.2 | 55.0 | 6.8 | 20.3 | 0.7 |
| 1977 | 1.6 | 0.5 | 51.8 | 9.0 | 48.2 | 1.2 |
| 1978 | 9.7 | 0.0 | 71.5 | 4.2 | 51.0 | 0.2 |
| 1979 | 2.0 | 0.1 | 89.0 | 7.1 | 59.0 | 5.0 |
| 1980 | 0.0 | 3.0 | 40.5 | 22.7 | 18.7 | 3.1 |
| 1981 | 0.0 | 0.2 | 39.9 | 17.0 | 46.5 | 2.0 |
| 1982 | 0.1 | 2.3 | 2.7 | 9.4 | 4.8 | 11.0 |
| 1983 | 2.0 | 0.0 | 34.3 | 5.6 | 17.8 | 0.0 |
| 1984 | 14.6 | 1.4 | 61.0 | 42.5 | 18.3 | 0.7 |
| 1985 | 0.3 | 0.0 | 181.6 | 10.6 | 36.8 | 0.3 |
| 1986 | 10.0 | 0.0 | 150.0 | 7.6 | 12.0 | 0.0 |
| 1987 | 11.9 | 0.1 | 24.7 | 6.9 | 15.5 | 0.8 |
| 1988 | 14.0 | 1.1 | 126.0 | 30.6 | 30.8 | 0.4 |
| 1989 | 3.8 | 0.3 | 161.0 | 4.0 | 51.0 | 0.5 |
| 1990 | 0.5 | 4.4 | 47.3 | 33.7 | 7.4 | 0.5 |
| 1991 | 0.0 | 0.1 | 118.3 | 332.9 | 128.8 | 0.0 |
| 1992 | 9.0 | 0.0 | 109.3 | 285.8 | 36.1 | 2.3 |
| 1993 | 0.0 | 1.0 | 230.2 | 22.7 | 196.9 | 4.8 |

^a Escapements from 1953-1984 are based on index estimates described by Shaul and Schwarz (1989) and from 1985-1992 estimates are based on area-under-the-curve methodology described by Johnson and Barrett (1988).

Table 49. Subsistence harvest of salmon in the Chignik Management Area, 1976-1993.^a

| Year | Subsistence Harvest | | | | | Total |
|---------|---------------------|---------|-------|-------|-------|--------|
| | Chinook | Sockeye | Coho | Pink | Chum | |
| 1976 | 100 | 6,000 | 1,500 | 500 | 150 | 8,250 |
| 1977 | 50 | 9,700 | 2,400 | 1,800 | 600 | 14,550 |
| 1978 | 50 | 6,000 | 500 | 2,100 | 600 | 9,250 |
| 1979 | 14 | 7,750 | 34 | 262 | 0 | 8,060 |
| 1980 | 9 | 7,831 | 27 | 400 | 141 | 8,408 |
| 1981 | 100 | 5,840 | 0 | 0 | 0 | 5,940 |
| 1982 | 2 | 2,320 | 8 | 1 | 0 | 2,331 |
| 1983 | 0 | 3,438 | 1,880 | 1,680 | 1,136 | 8,134 |
| 1984 | 26 | 8,222 | 553 | 403 | 247 | 9,451 |
| 1985 | 1 | 7,615 | 60 | 32 | 0 | 7,708 |
| 1986 | 6 | 10,356 | 261 | 121 | 95 | 10,839 |
| 1987 | 10 | 7,021 | 278 | 204 | 261 | 7,774 |
| 1988 | 3 | 8,848 | 1,817 | 79 | 158 | 10,905 |
| 1989 | 20 | 12,325 | 1,200 | 150 | 148 | 13,843 |
| 1990 | 112 | 9,733 | 566 | 1,332 | 295 | 12,038 |
| 1991 | 29 | 12,649 | 14 | 373 | 115 | 13,180 |
| 1992 | 12 | 11,276 | 911 | 502 | 236 | 12,937 |
| 1993 | 122 | 14,769 | 3,706 | 1,265 | 642 | 20,503 |
| Average | 37 | 8,427 | 873 | 622 | 268 | 10,227 |

^a Subsistence harvests are estimated by expanding results of returned permits to total number of permits issued.

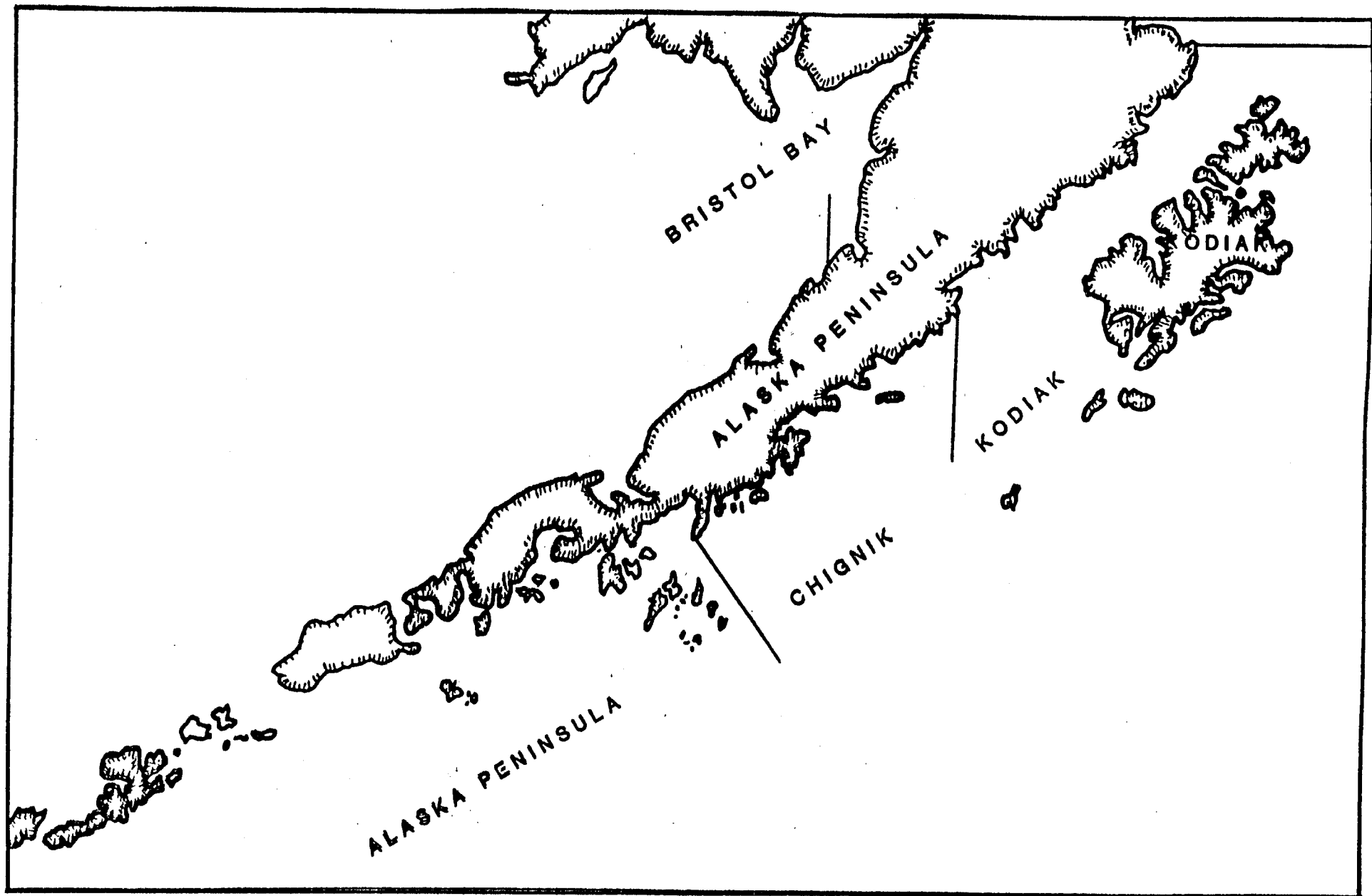


Figure 1. Map of the Alaska Peninsula illustrating the relative location of the Chignik Management Area, 1993.

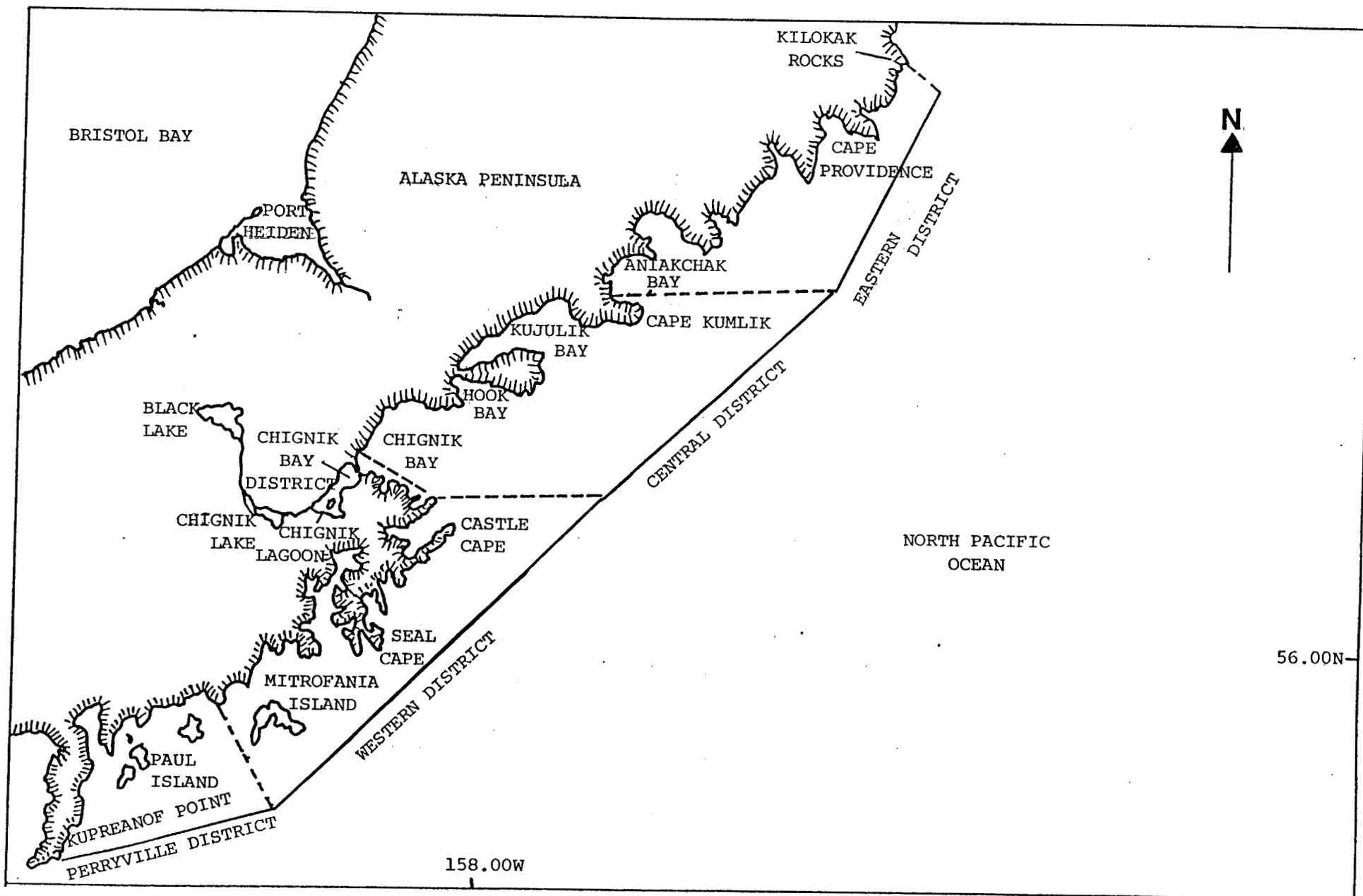


Figure 2. Map of the Chignik Management Area illustrating district boundaries, 1993.

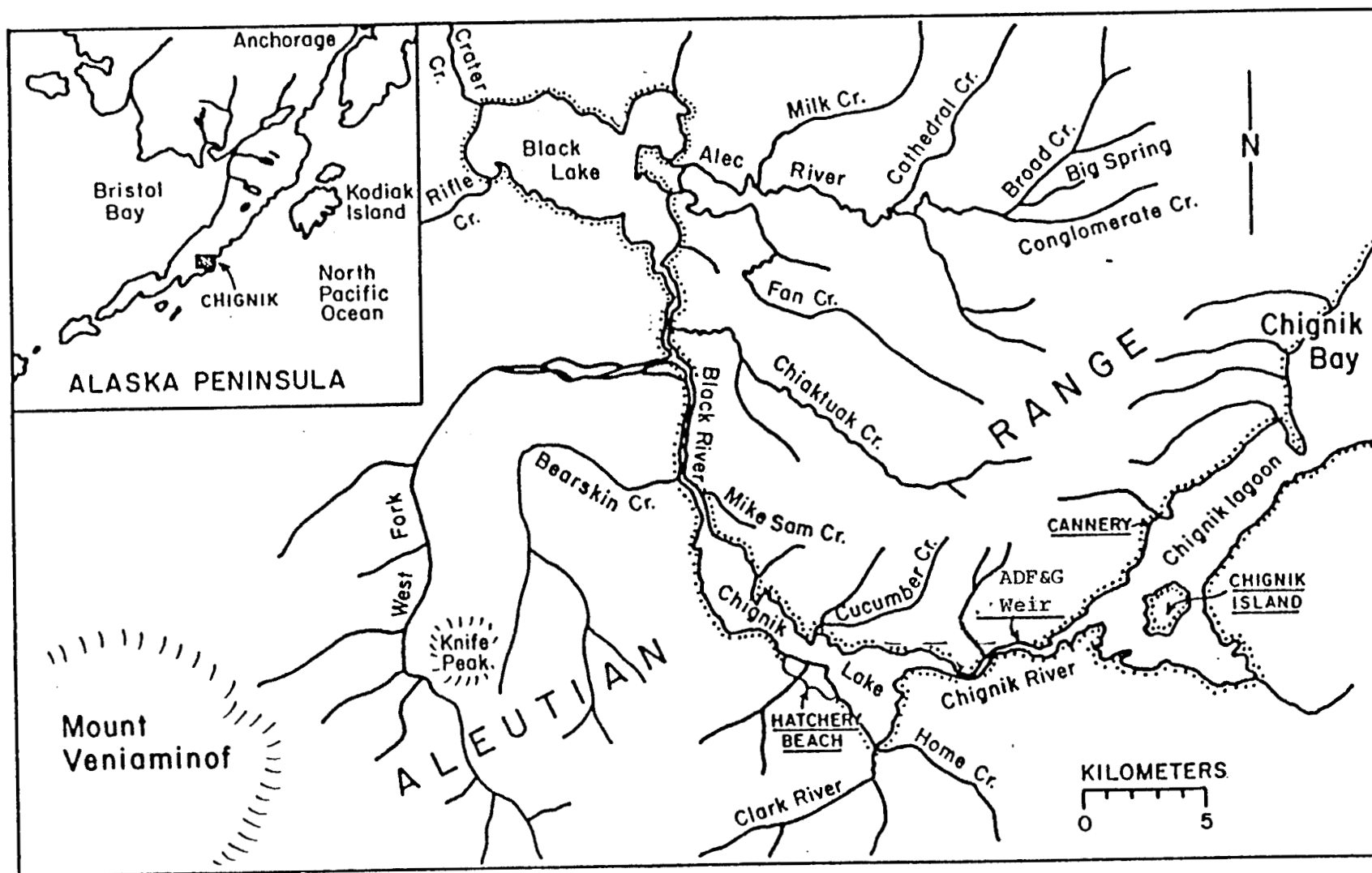


Figure 3. Map of the Chignik River watershed with inset of western Alaska, 1993.

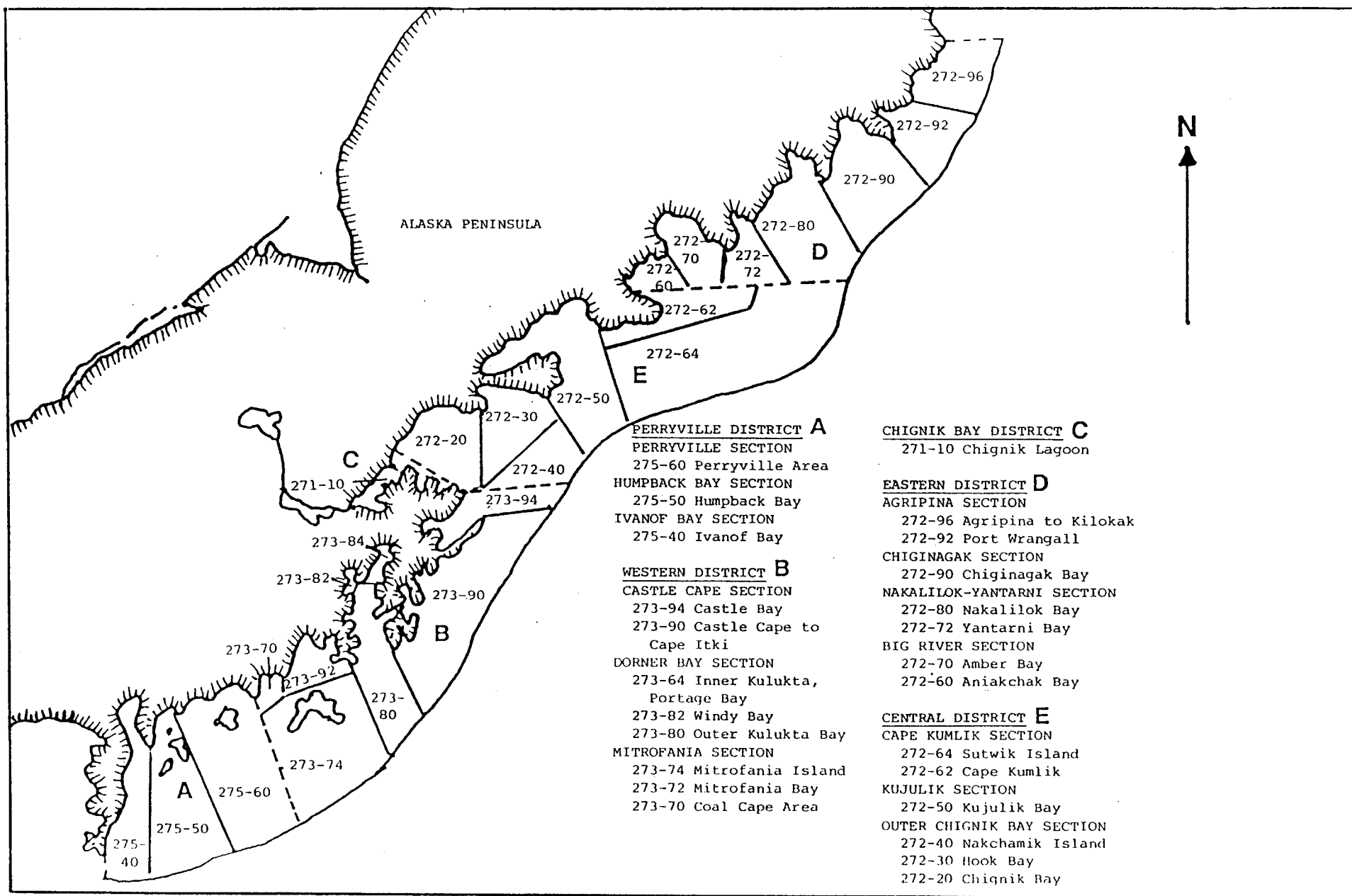


Figure 4. Map of the Chignik Management Area illustrating statistical areas, 1993.

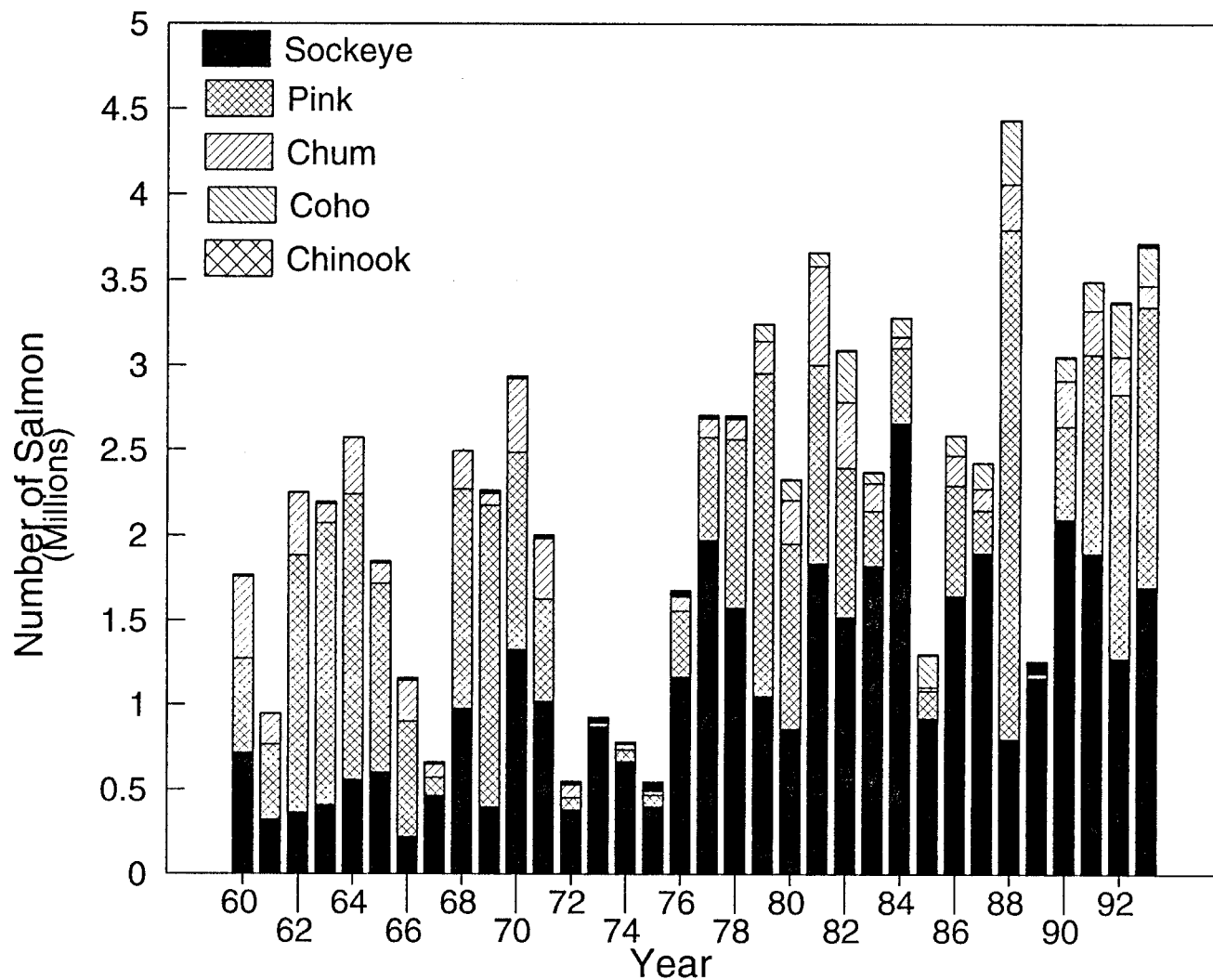


Figure 5. Chignik Management Area total salmon harvests by species, 1960 - 1993.

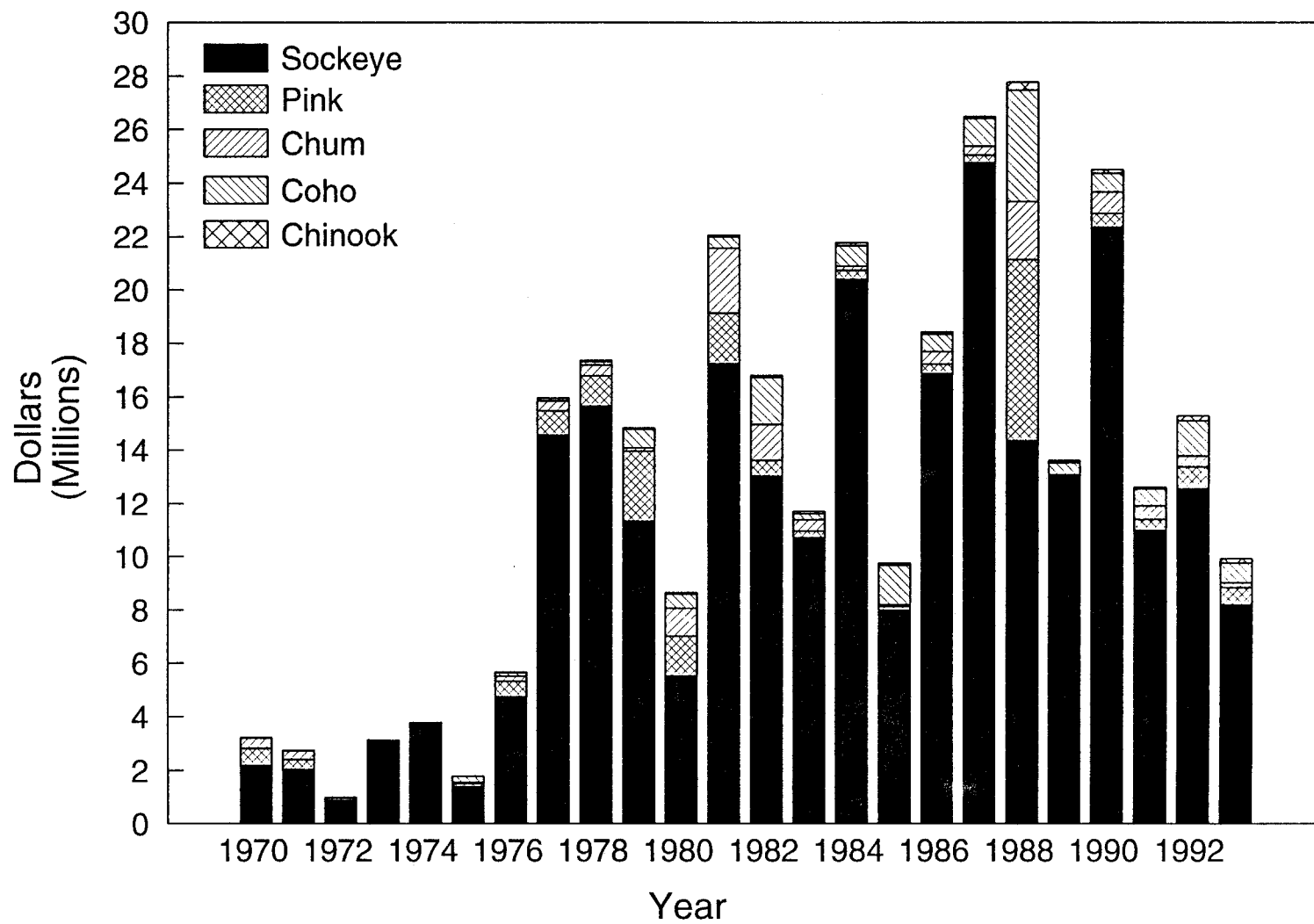


Figure 6. Chignik Management Area exvessel value of salmon harvest, 1970 - 1993.

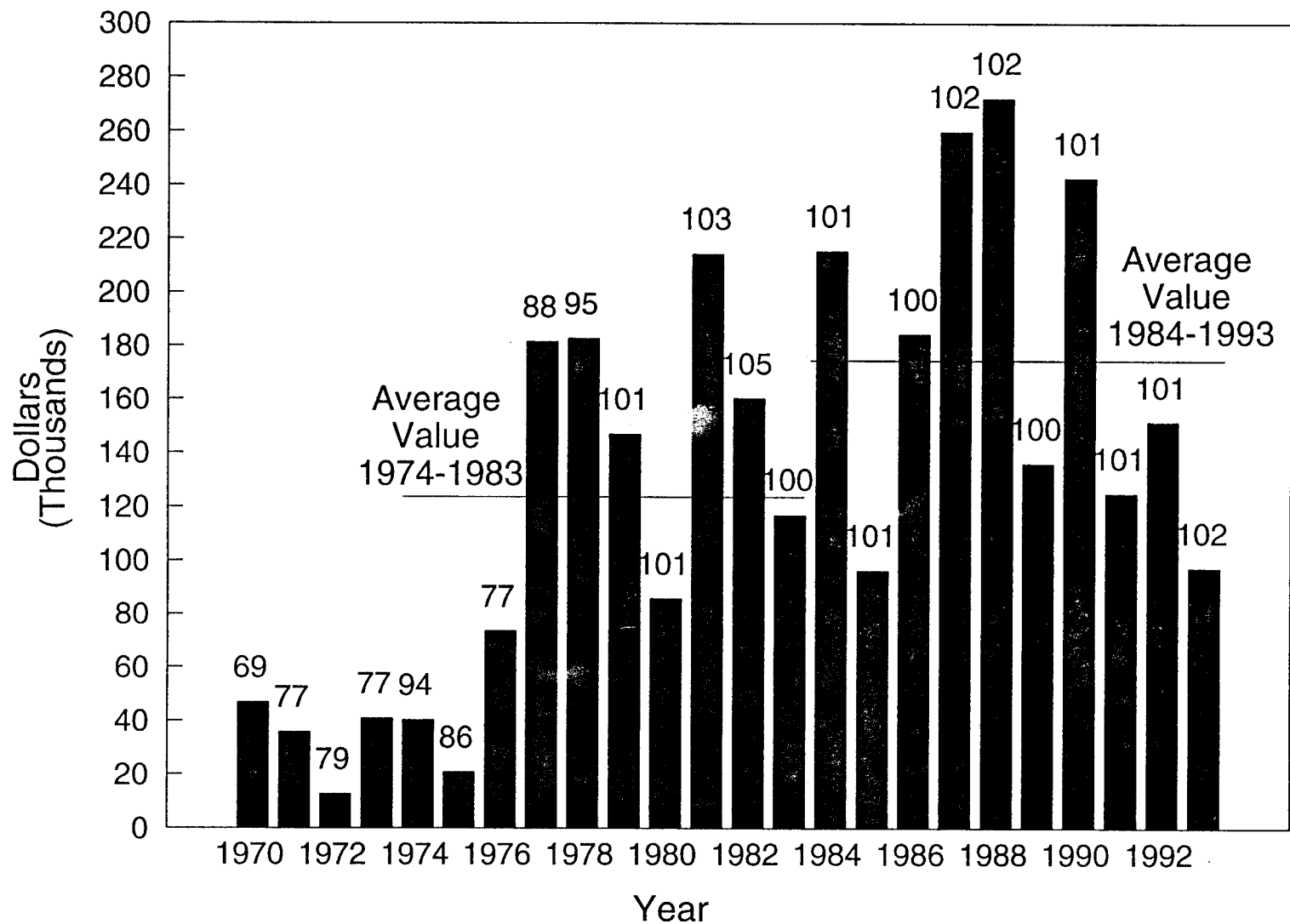


Figure 7. Average economic value of Chignik salmon per permit holder, 1970-93. Number above bar represents the number of permits fished that year.

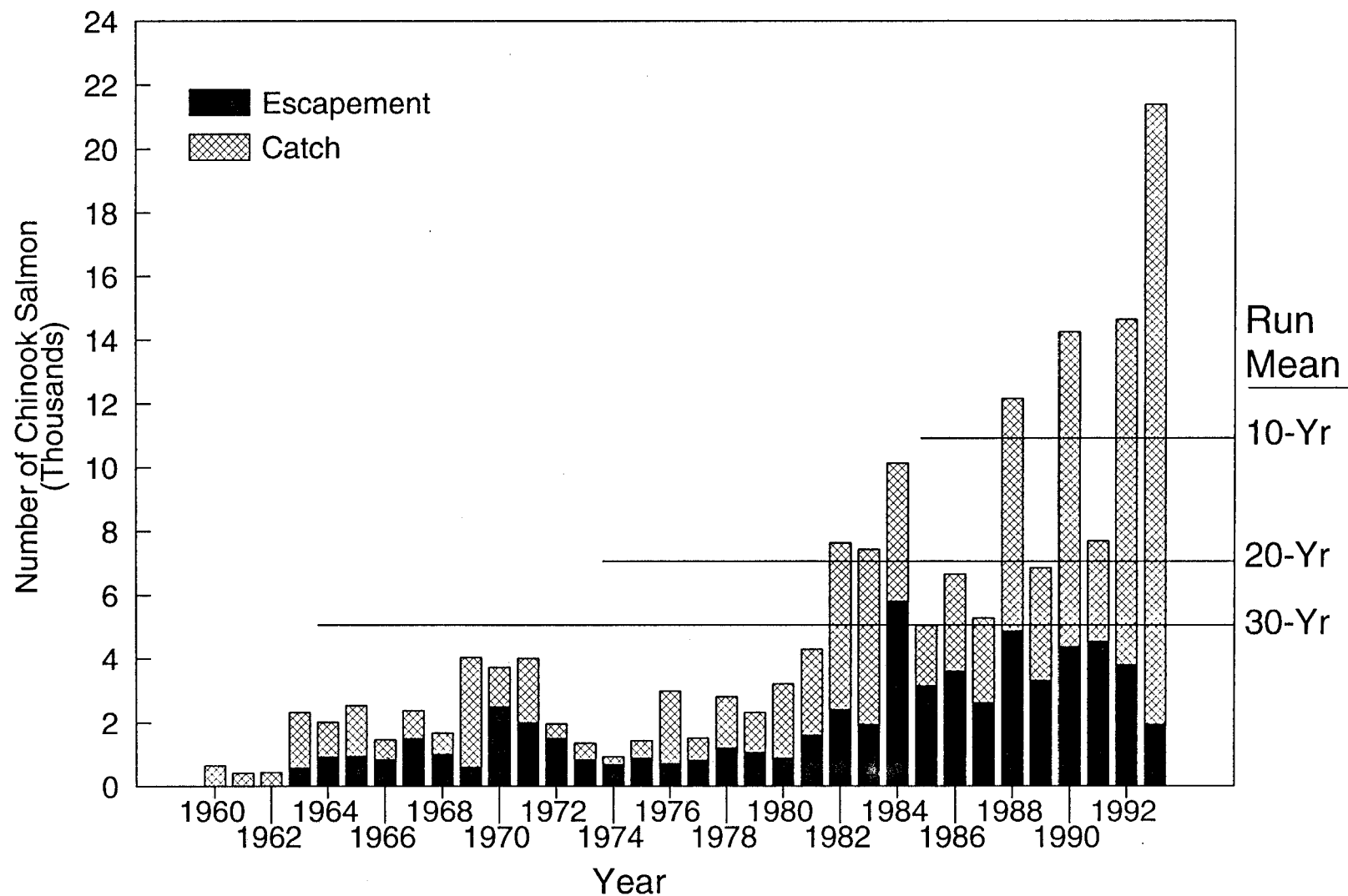


Figure 8. Chignik Management Area chinook salmon catch and escapement, 1960 - 1993.

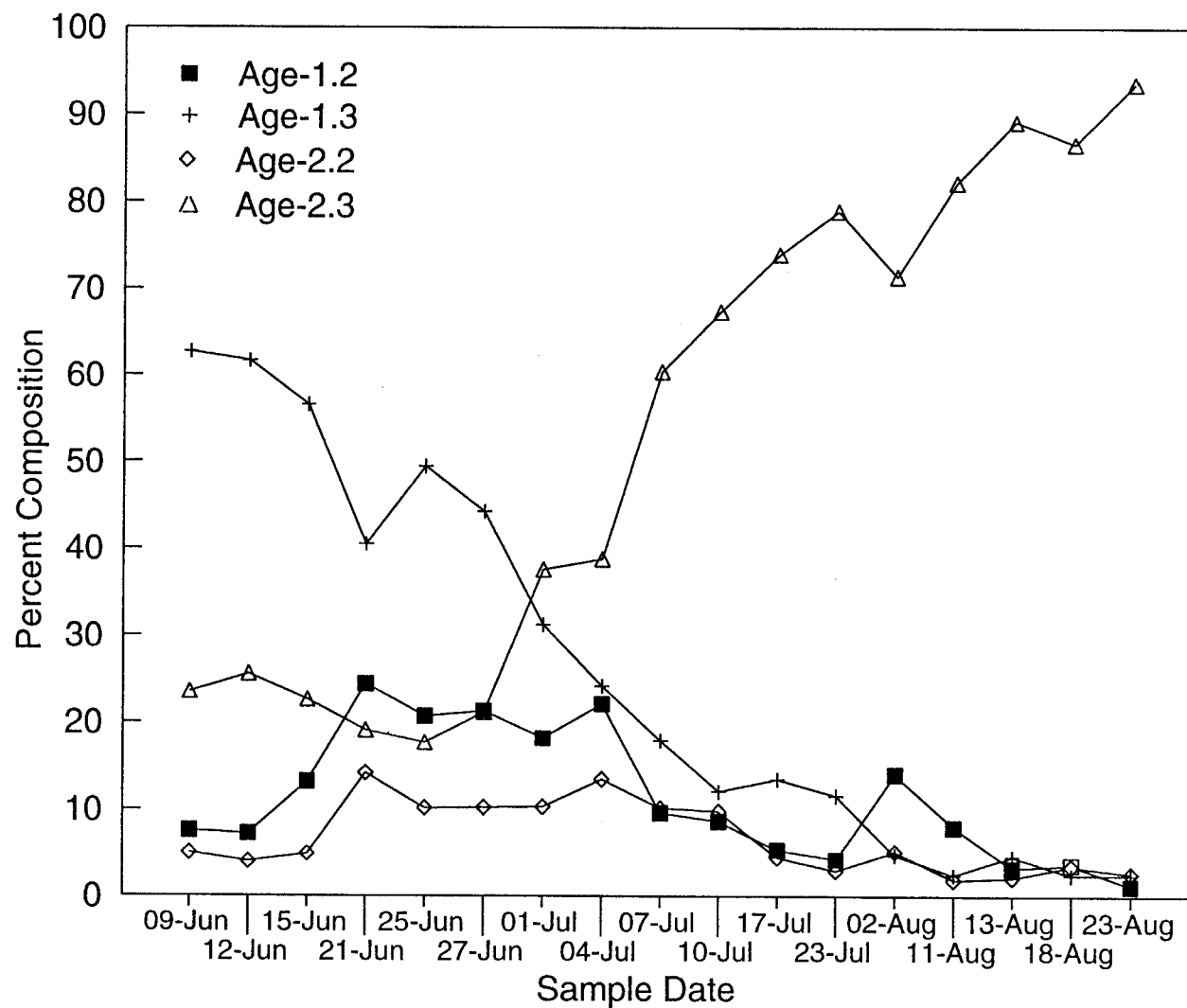


Figure 9. Age composition of sockeye salmon sampled in the Chignik Lagoon fishery, 1993.

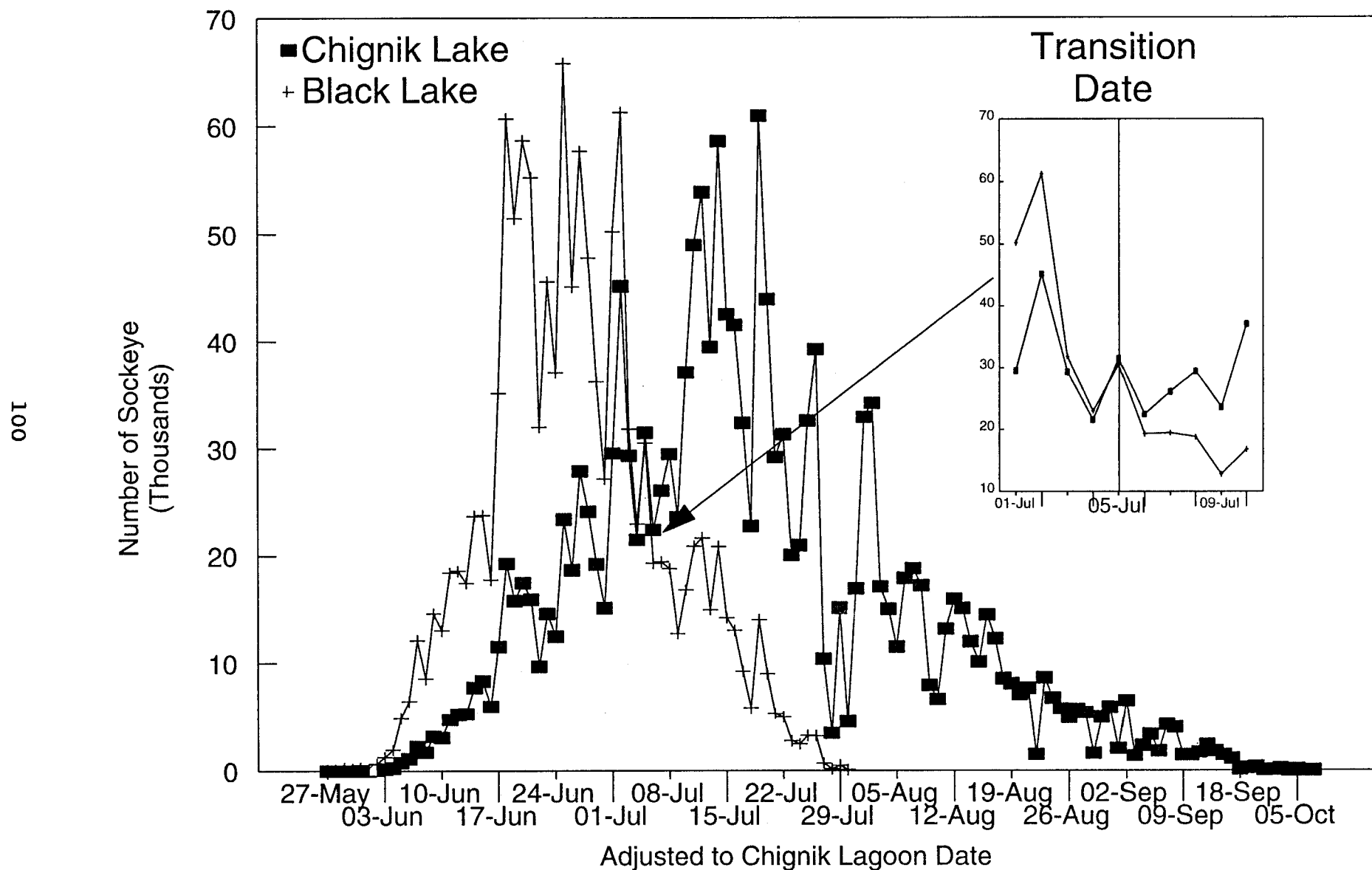


Figure 10. Daily sockeye salmon run by stock to the Chignik Lake system as estimated by scale pattern analysis, 1993.

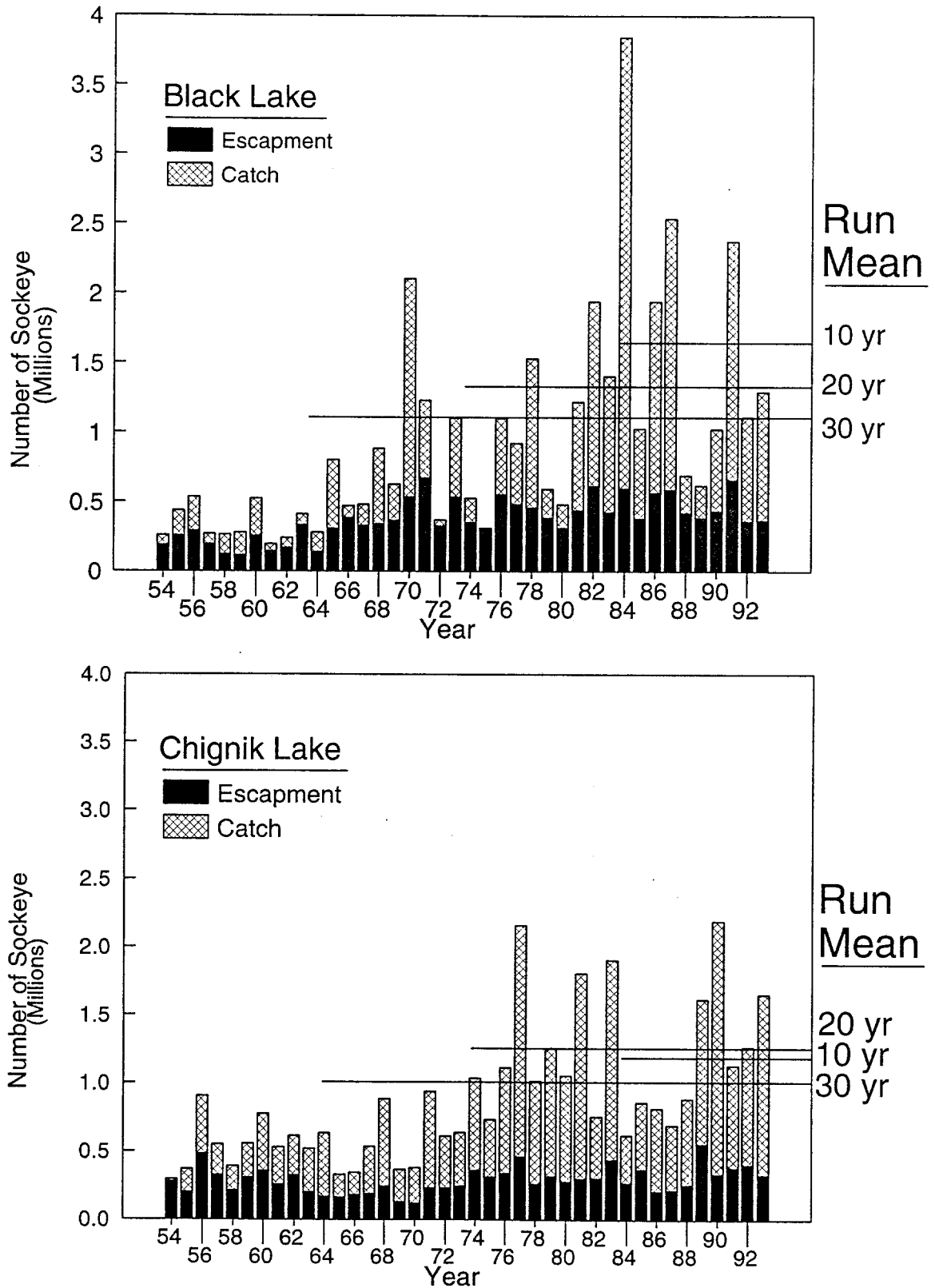


Figure 11. Black and Chignik Lake sockeye salmon catch and escapement, 1954 - 1993.

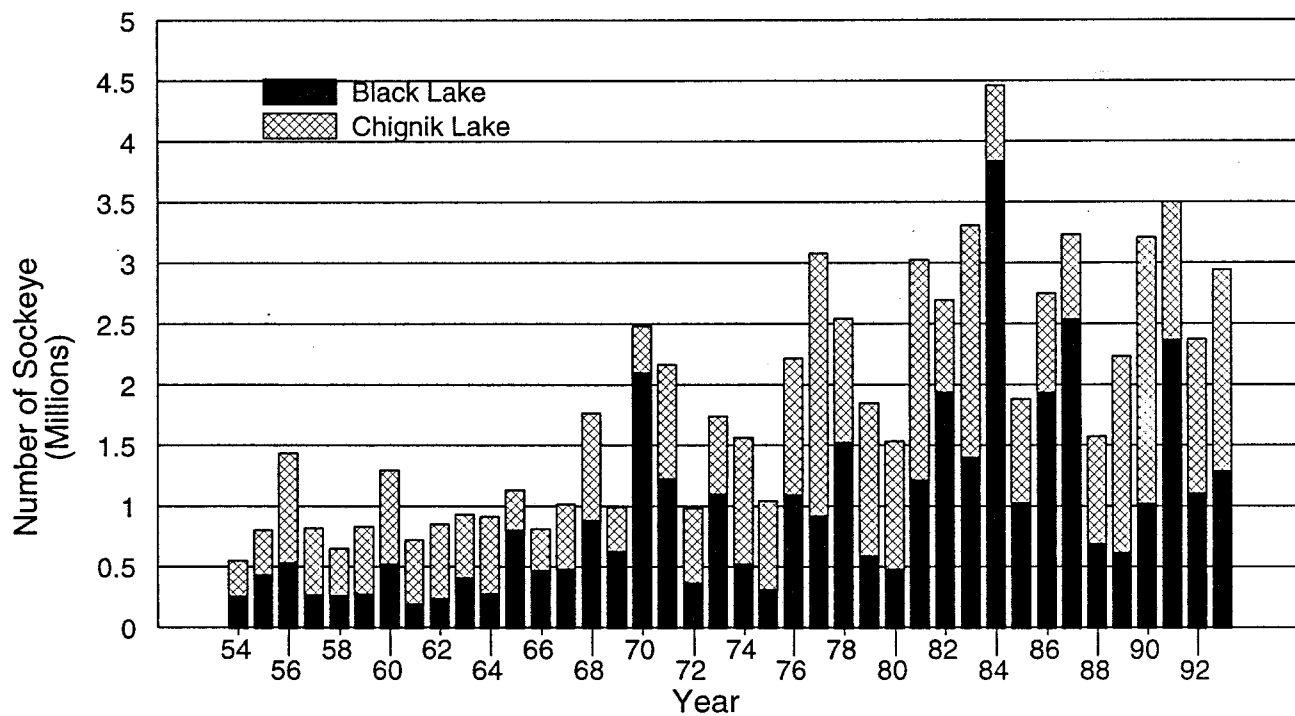
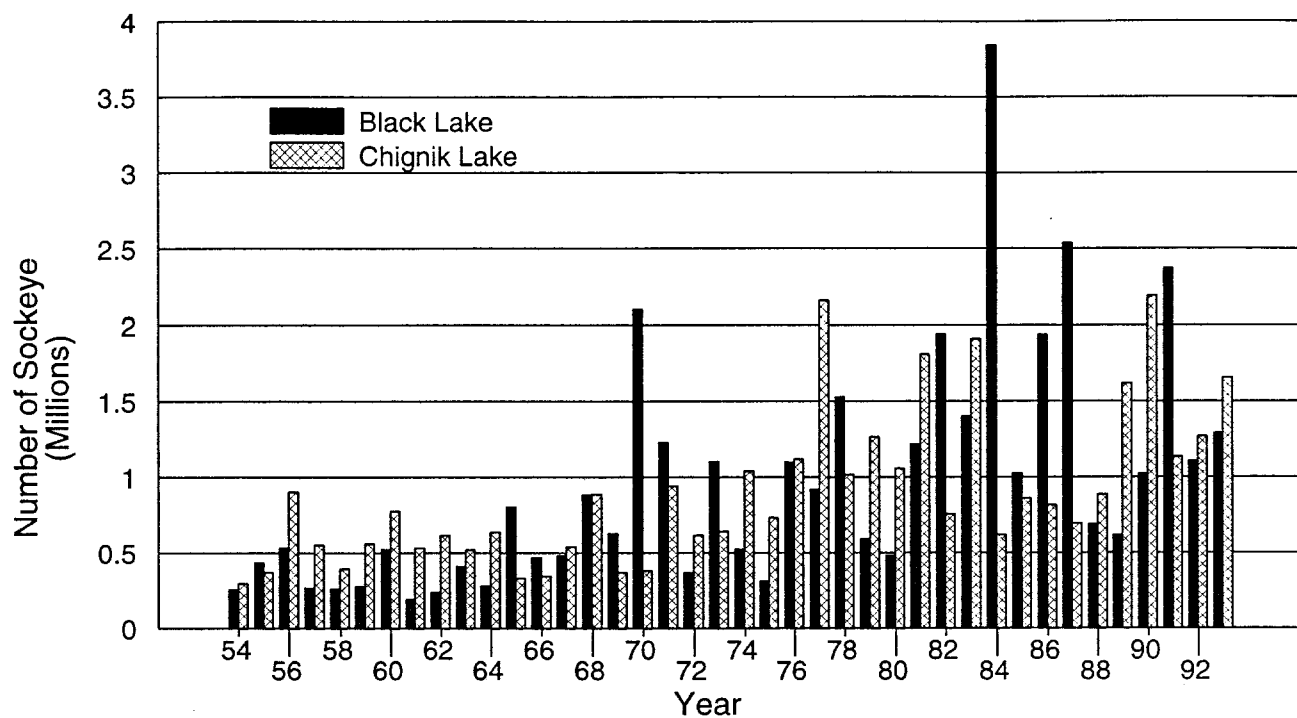


Figure 12. Total sockeye salmon runs to Black and Chignik Lakes, 1954 - 1993.

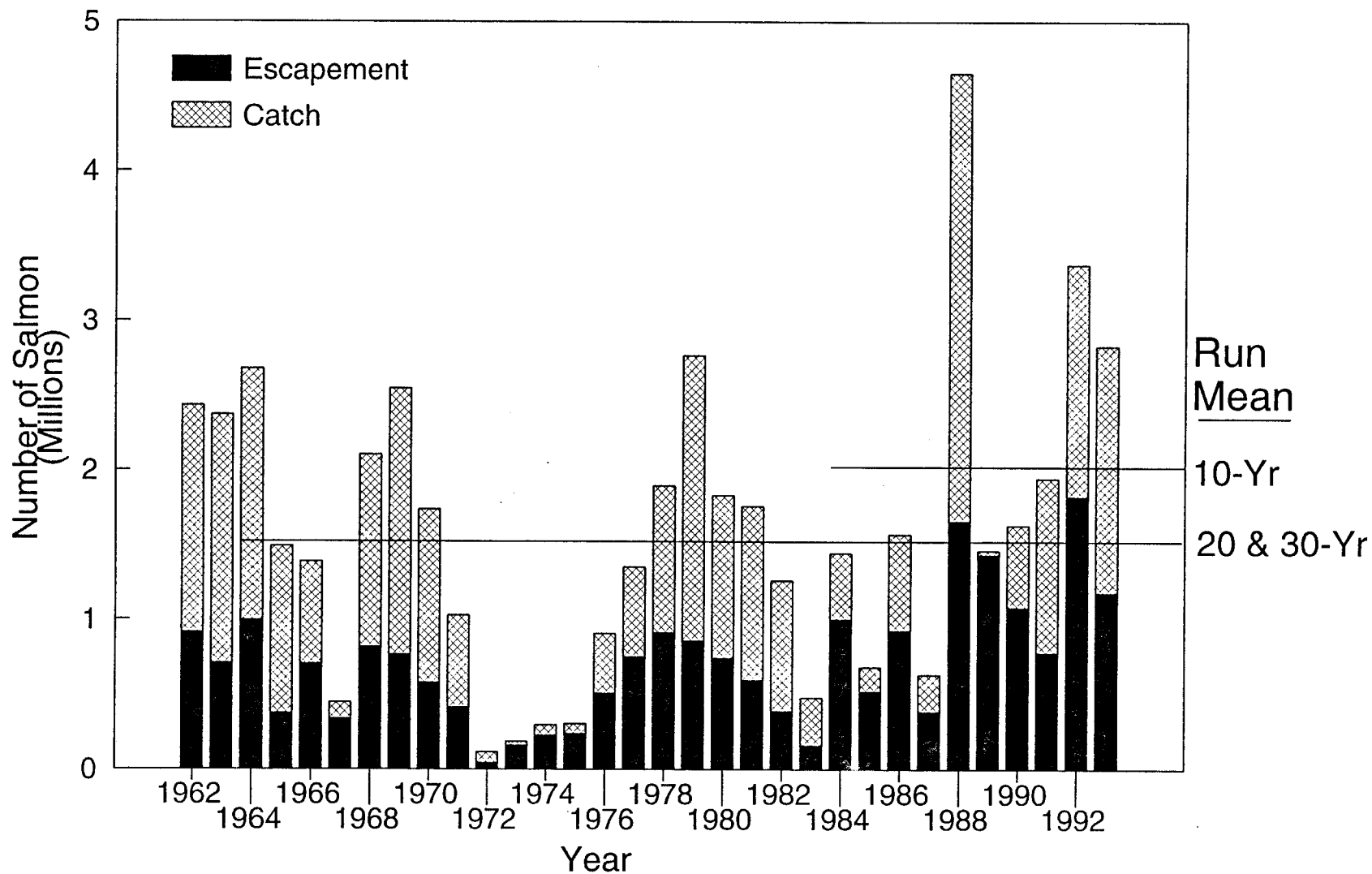


Figure 13. Chignik Management Area pink salmon catch and escapement, 1962-1993.

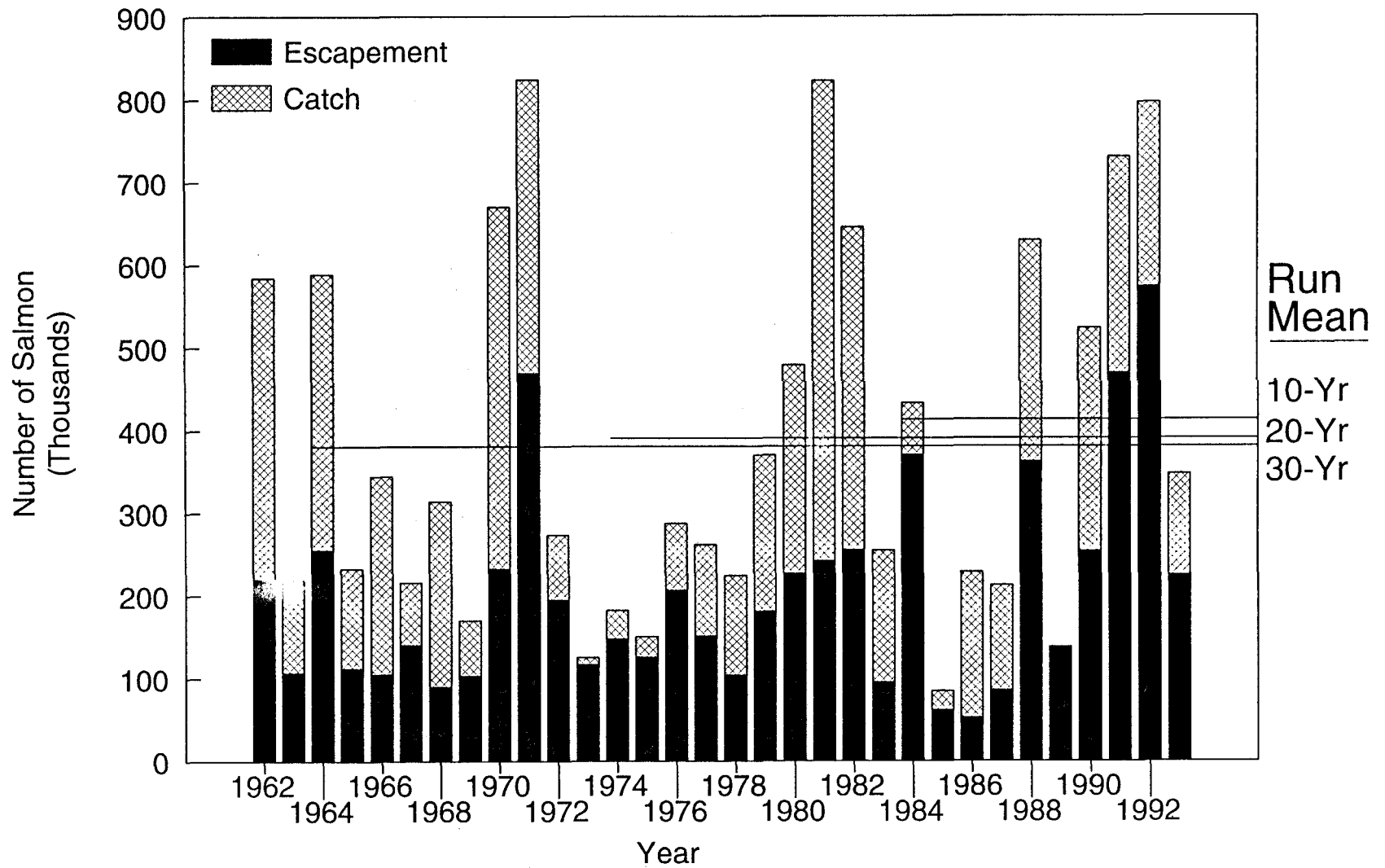


Figure 14. Chignik Management Area chum salmon catch and escapement, 1962 - 1993.

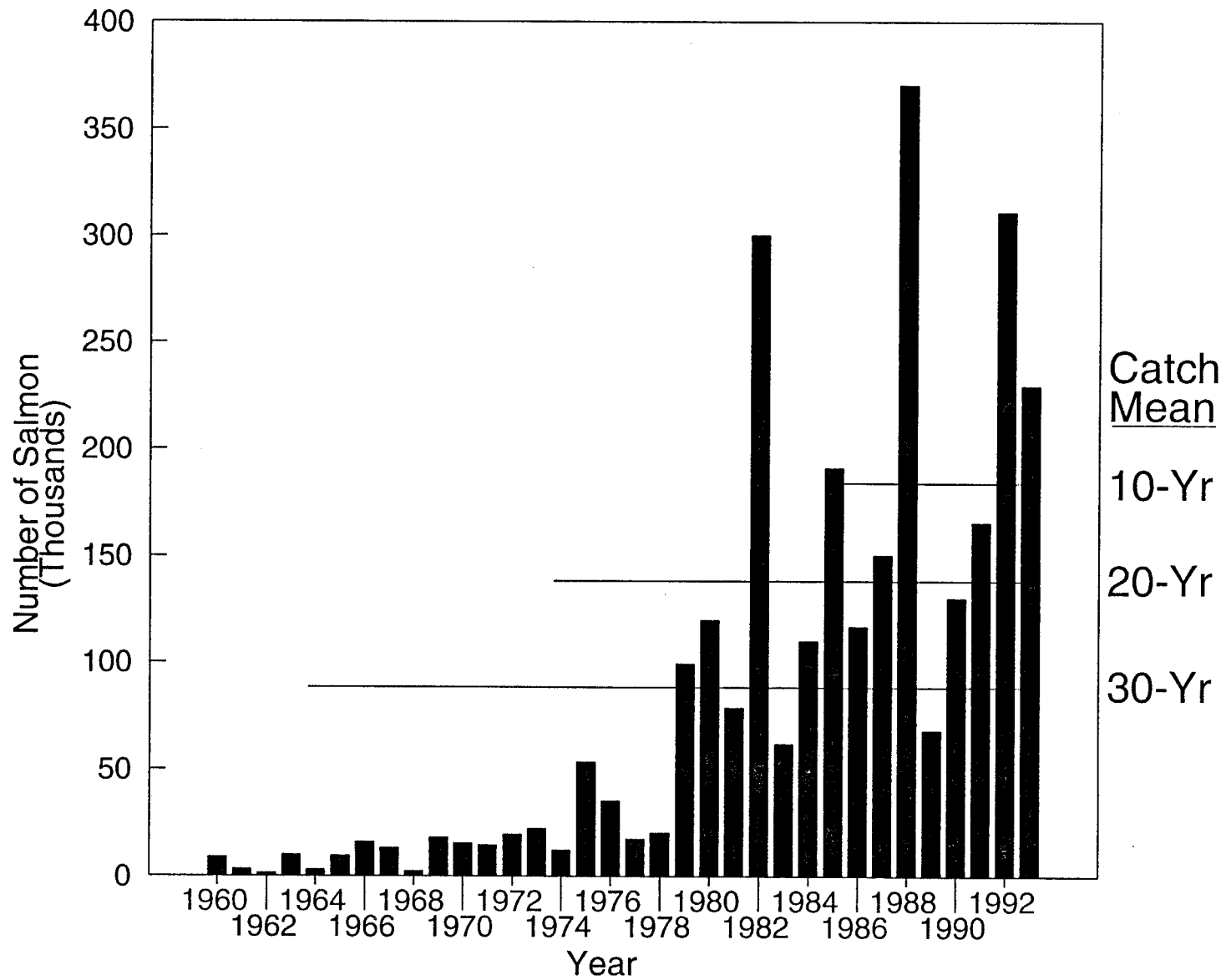


Figure 15. Chignik Management Area coho salmon catch, 1960 - 1993.

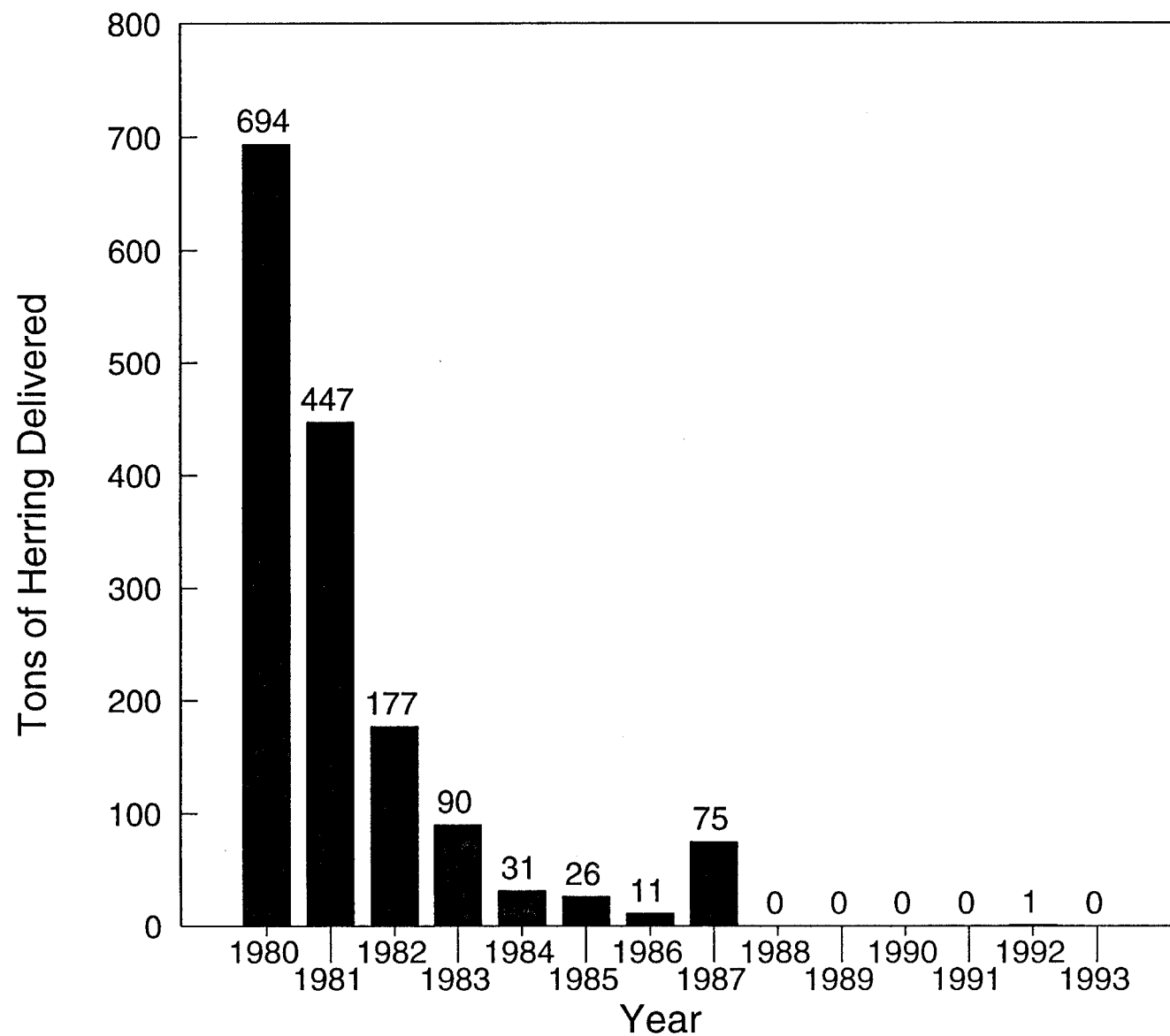


Figure 16. Chignik Management Area herring harvests, 1980 - 1993.

APPENDIX

FORECAST AREA: Chignik Management Area
Species: Sockeye salmon

PRELIMINARY FORECAST OF THE 1993 RUN

| <u>Early Run</u> (Black Lake) | <u>Point Estimate</u> | <u>80% Prediction Forecast Range</u> |
|--------------------------------|---------------------------|--|
| Total Run: | 1,600,000 | 1,120,000 to 2,160,000 |
| Escapement: | 400,000 | |
| Catch: | 1,200,000 | |
| <u>Late Run</u> (Chignik Lake) | | |
| Total Run: | 950,000 | 620,000 to 1,620,000 |
| Escapement: | 250,000 | |
| Catch: | 700,000 | |
| <u>Total Chignik Run</u> | | |
| Total Run: | 2,590,000 | 1,740,000 to 3,780,000 |
| Escapement: | 650,000 | |
| Catch: | 1,940,000 | |

FORECAST METHODS:

The estimated run to Black Lake is the sum of a regression estimate for two major age classes (ages 1.3 and 2.3) and a 10-year average for minor age classes, while the Chignik Lake run is based on a recruit per spawner relationship. The Black Lake forecast is based on the historical relationship between the number and length of prior year age 1.2 fish, and the parent year escapement number. All other age classes are predicted from a 10-year average. The Chignik Lake forecast accuracy has historically been quite variable and developing a model such as the one used for the Black Lake run has been unsuccessful. The Chignik Lake run forecast for 1993 was derived using an average return per spawner ($R/S = 4.41$) for years post 1969.

DISCUSSION OF THE 1993 FORECAST:

Early Run

The 1993 Black Lake sockeye salmon run is expected to be 1.64 million fish. This is approximately 0.10 million fish less than the 1982-91 average run of 1.74 million fish and 200,000 fish less than the 1992 forecast. This below average run is expected because in 1992 age 1.2 fish numbered 33,005 less than the 10 year average of 175,456.

-Continued-

Late Run

The estimated 1993 Chignik Lake sockeye run is 0.95 million fish, 20,000 less than the 1982-91 average of 1.15 million fish. The Chignik Lake run forecast accuracy has historically been quite poor when compared to actual returns. The 1987 parent year, which is expected to produce 60% of the 1993 run, was 35,548 below the 250,000 desired escapement goal.

Prepared By:

Alan Quimby
Area Management Biologist
Chignik Area ADF&G

Dave Owen
Assistant Area Biologist
Chignik Area ADF&G

Chignik Management Area 1993 Harvest Projections (in thousands)

| <u>Chinook¹</u> | <u>Sockeye²</u> | <u>Coho³</u> | <u>Pink⁴</u> | <u>Chum⁵</u> | <u>Total</u> |
|----------------------------|----------------------------|-------------------------|-------------------------|-------------------------|--------------|
| 5 | 1,940 | 169 | 1,300 | 213 | 3,627 |

- ¹ Chinook harvest is dependent upon the amount of fishing time allowed for sockeye salmon in July; the harvest projection approximates a 10-year average.
- ² Estimate includes projected harvest in the Cape Igvak and Southeast Mainland District intercept fisheries.
- ³ Coho salmon harvest is related to the strength of the Chignik Lake sockeye run. Lagoon and outside catches are based on a 10-year harvest average.
- ⁴ The pink salmon forecast is computed by multiplying the average recruit per spawner for the previous ten years by the parent year escapement. The catch projection is driven by escapements to the Central/Eastern and Western/Perryville Districts. The largest pink catches should come from the Western/Perryville Districts and could account for 60% of the projected total. Unstable stream conditions in these districts have resulted in poor returns from excellent parent year escapements.
- ⁵ The chum salmon forecast is computed by multiplying the average recruit per spawner for the previous ten years by the parent year escapement. Central/Eastern Districts should experience the largest proportion of the catch.

Appendix A.2. Comparison of Black Lake (early run) and Chignik Lake (late run) forecasts versus actual runs in millions of sockeye salmon, 1987-1993.

| Early Run | | | | Late Run | | | Combined Total Run | | |
|-----------|----------|--------|--------------------|----------|--------|--------------------|--------------------|--------|--------------------|
| Year | Forecast | Actual | Percent Difference | Forecast | Actual | Percent Difference | Forecast | Actual | Percent Difference |
| 1987 | 1.8 | 2.5 | -38.9 | 1.3 | 0.7 | 46.2 | 3.1 | 3.2 | -3.2 |
| 1988 | 1.4 | 0.7 | 50.0 | 0.8 | 0.9 | -12.5 | 2.2 | 1.6 | 27.3 |
| 1989 | 1.2 | 0.6 | 50.0 | 1.0 | 1.6 | -60.0 | 2.2 | 2.2 | 0.0 |
| 1990 | 0.8 | 1.0 | -25.0 | 1.0 | 2.2 | -120.0 | 1.8 | 3.2 | -77.8 |
| 1991 | 2.8 | 2.4 | 14.3 | 1.1 | 1.1 | 0.0 | 3.9 | 3.5 | 7.7 |
| 1992 | 1.8 | 1.1 | 38.9 | 0.9 | 1.3 | -44.4 | 2.7 | 2.4 | 11.1 |
| 1993 | 1.6 | 1.3 | 18.8 | 1.0 | 1.7 | -70.0 | 2.6 | 3.0 | -15.4 |

CHIGNIK MANAGEMENT AREA
COMMERCIAL SALMON MANAGEMENT PLAN, 1993

By

Alan Quimby
and
David Owen

Regional Information Report¹ No. 4K93-9

Alaska Department of Fish and Game
Division of Commercial Fisheries
211 Mission Road
Kodiak, Alaska 99615

March 1993

¹The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished division reports. These reports frequently serve diverse ad hoc informational purposes or archive basic uninterpreted data. To accommodate timely reporting of recently collected information, reports in this series undergo only limited internal review and may contain preliminary data; this information may be subsequently finalized and published in the formal literature. Consequently, these reports should not be cited without prior approval of the author or the Division of Commercial Fisheries.

TABLE OF CONTENTS

| | <u>Page</u> |
|---|-------------|
| LIST OF TABLES | i |
| LIST OF FIGURES | i |
| LIST OF APPENDICES | i |
| INTRODUCTION | 1 |
| SOCKEYE SALMON | 1 |
| PINK AND CHUM SALMON | 2 |
| COHO SALMON | 3 |
| TENDER AND PROCESSOR REPORTING REQUIREMENTS | 4 |
| APPENDIX | 8 |

LIST OF TABLES

| <u>Table</u> | <u>Page</u> |
|---|-------------|
| 1. Chignik River System sockeye salmon escapement goals for Black Lake (early) and Chignik Lake (late) runs, by time period | 5 |

LIST OF FIGURES

| <u>Figure</u> | <u>Page</u> |
|--|-------------|
| 1. Map of the Chignik Management Area illustrating district boundaries, 1993 | 6 |
| 2. Map of the Chignik Management Area illustrating statistical areas, 1993 | 7 |

LIST OF APPENDICES

| <u>Appendix</u> | <u>Page</u> |
|---|-------------|
| 1. Management Guide for the Cape Igvak Fishery, 1993 | 9 |
| 2. Southeastern District Mainland (Alaska Peninsula Area) Management Plan, 1993 | 10 |

INTRODUCTION

The Chignik Commercial Salmon Management Area encompasses all coastal waters and inland drainages of the northwest Gulf of Alaska between Kilokak Rocks and Kupreanof Point (Figure 1). The area includes the Chignik River system and approximately 100 other salmon producing streams and tributaries.

The management area is divided into five districts: Eastern, Central, Chignik Bay, Western, and Perryville Districts (Figure 2). The Alaska Department of Fish and Game (ADF&G) manages all districts to achieve escapement goals for all salmon species while allowing for the orderly harvest of fish surplus to spawning requirements.

For 1993, waters closed to salmon fishing are described in the 1992-94 commercial finfish regulation booklet. Three closed water changes were made by the Board of Fisheries in 1987 and a boundary change made in 1989. These changes increased the closed water areas in Ivanof Bay, Portage Bay, Kujulik Bay, and moved the district boundary line between the Western and Central Districts.

Purse and hand purse seines are the only legal gear types for the Chignik Area commercial salmon fishery. In the Eastern, Central, Western and Perryville Districts, no seine less than 100 fathoms or more than 225 fathoms in length may be used. In the Chignik Bay District seines may not be less than 100 fathoms or more than 125 fathoms in length.

This document provides information on the management of the Chignik commercial salmon fisheries. Inseason fishing time will be established by emergency order as relative run strength of salmon stocks are assessed.

SOCKEYE SALMON

The total sockeye salmon run returning in 1993 is forecast to be approximately 2.59 million sockeye salmon¹. The early run, projected to be 1.64 million sockeye salmon, has an escapement goal of 400,000 sockeye salmon with a forecasted harvest of 1.20 million sockeye salmon. Approximately 1.94 million sockeye salmon of the early run will be harvested in the Chignik Management Area. The remaining sockeye salmon will potentially be harvested in either the Cape Igvak or the Southeast District Mainland fisheries. The late run return is expected to be smaller than the early run and forecasted at 950,000 sockeye salmon. The escapement goal for the late run is 250,000 sockeye salmon which should allow a commercial harvest of approximately 700,000 sockeye salmon. Approximately 550,000 of those salmon will also be harvested in the Chignik Management Area. The total projected harvest for both runs is 1.94

¹All harvest projections are based on mid-point projections.

million sockeye salmon of which approximately 1.52 million sockeye salmon are expected to be caught in the Chignik Management Area.

The first commercial fishing period can occur by regulation on June 1. However, based on the last 10 years of data, the first fishery usually occurs after June 11.

Requirements for the first opening includes passing a minimum of 40,000 sockeye salmon through the weir by June 12 and ADF&G's test fisheries indicate a strong buildup of salmon in Chignik Lagoon. Additional openings will be determined from several factors including: escapement counts, commercial catches, and test fishing results (Table 1).

During June, commercial fishing will be allowed only in the Chignik Bay, Central, and Eastern Districts. Commercial salmon fishing will open and close simultaneously in the Eastern, Chignik Bay, and Central Districts as outlined by the Alaska Board of Fisheries' Eastern District Management Plan (5AAC 15.360). During June and early July, the Eastern District may close until the run strength of the Chignik Lake run (Late Run or 2nd Run) can be determined. After July 15, the Eastern District will be managed on the basis of local pink and chum salmon run strength, in addition to sockeye salmon. If it is determined that stocks being harvested within the Eastern District are not primarily Chignik stocks, the fishery in this district will be closed by emergency order as directed by the Alaska Board of Fisheries in the Eastern District Management Plan.

The fisheries in the Cape Igvak Section of the Kodiak Management Area and the Southeastern District Mainland Fishery of the Alaska Peninsula Management Area intercept Chignik bound sockeye salmon. The Cape Igvak and the Southeastern District Salmon Management Plans, as adopted by the Alaska Board of Fisheries, will be used to manage these fisheries (Appendix A and B).

PINK AND CHUM SALMON

The 1993 projected pink salmon harvest is 1.30 million salmon. The projected harvest is based on the average return per spawner data base for even years from 1966 to 1988, and the parent year escapements in 1991.

The projected chum salmon harvest for Chignik waters is 213,000 salmon. Aerial surveys will be conducted to monitor chum salmon escapements. Area specific openings are possible and a 24 hour notice will be given prior to a commercial fishing opening. Openings and closures will be broadcast over 4125 SSB and CH 6 VHF.

The first openings in the Western and Perryville Districts, (includes all waters south and west of Jack Point, excluding the waters of Chignik Lagoon, to Coal Cape), are tentatively scheduled to open on July 6.

Pink and chum management in the Eastern District will be based on the following management plan:

5 AAC 15.360. EASTERN DISTRICT SALMON MANAGEMENT PLAN.

- (a). The Department shall open and close the Eastern District for commercial salmon fishing concurrently with the Chignik Bay and Central Districts. The Department may close the Eastern District for the period between the first (Black Lake) and second (Chignik Lake) sockeye salmon runs.
- (b). The Department shall close the Eastern District on July 15 to evaluate run strength of the pink and chum salmon runs.
- (c). The Department shall close the Eastern District if it is determined that the salmon being harvested in that district are from stocks not originating from spawning areas located in the Chignik Area.

Processors within the Chignik Area primarily freeze fish for the higher quality fresh frozen market. Subsequently, greater demands are placed on management to harvest fish in optimum condition. Management strategies will be adjusted to harvest fish as they migrate to their natal streams, such as increased early fishing effort when a harvestable surplus is available.

Because of the economic importance placed on Chignik sockeye salmon, run timing and strength of the Chignik River runs (Black Lake: Early Run and Chignik Lake: Late Run) will directly affect commercial fishing time in the Eastern, Western, and Perryville Districts.

If the early sockeye salmon run strength (Black Lake) is weaker than forecasted, and the 400,000 salmon escapement goal through the Chignik River weir is not achieved, then the early July openings in all waters where sockeye salmon could be intercepted may be curtailed. Commercial fishing openings during the transition period between the two sockeye salmon runs (June 26 to July 9) will also be closely monitored to allow evaluation of the Chignik Lake run strength to assure the 250,000 salmon escapement goal.

COHO SALMON

Providing escapement goals can be met for the late sockeye run to Chignik Lake, fisheries for late run sockeye and coho salmon will begin in mid-August and continue through September. The coho salmon harvest in 1993 is projected to be 169,000 salmon. The average coho harvest from 1983-92 was 169,000 fish.

Chignik Bay District coho stocks are expected to be in similar abundances as in recent years. Management in smaller systems, particularly in the Eastern District, will continue to be conservative to prevent overharvest during the initial openings.

TENDER AND PROCESSOR REPORTING REQUIREMENTS

- a. 5AAC 15.355. The operator of a floating salmon processing vessel or tender, or a shorebased processing operation, and a company employing aircraft used for transporting salmon, shall report in person, or by radio or telephone, to a local representative of the department located in the management area of intended operation before the start of processing or buying operations. The report must include the location and the date of intended operation, and identify and describe each vessel or other method of transport employed in hauling or processing salmon.
- b. All processors and tender operators will be required to report daily catch information to ADF&G. This can be accomplished either by radio (SSB) or telephone. The Chignik ADF&G office will stand by on 4125 SSB and VHF CH 6 frequencies, between 0800 and 1000 hours and 2000 and 2200 hours. The call sign for Chignik is KGB 76 "Chignik Weir" and the telephone number is 845-2243. If unable to contact ADF&G Chignik, your catch information should be given to ADF&G Cold Bay (532-2419) or Kodiak (486-1830) via telephone or 4125 SSB. The call signs for Kodiak and Cold Bay are WHM 29 and WHW 906, respectively. **Failure to report is a violation of commercial fishing regulations (5 AAC 27.590 (2)); vigorous enforcement of this regulation should be expected.**
- c. Individual code sheets will be given to each tender/processor for the purpose of reporting catch and statistical area of catch.

Table 1. Chignik River system sockeye salmon escapement goals for Black lake (early) and Chignik Lake (late runs), by time period.

The numbers of fish presented in the escapement tables below were derived from averages over several years of escapements of various timing and magnitude. It should be noted that daily escapement levels will fluctuate considerably throughout the run. The tables listed serve only as a guide for achieving the total escapement for each run. In-season variations from the figures listed may be due to variations in actual run timing and/or strength of the run.

| DATE | EARLY RUN - 400,000 ESCAPEMENT |
|---------|-----------------------------------|
| JUNE 12 | 40,000 |
| JUNE 14 | 50 - 65,000 |
| JUNE 16 | 75 - 100,000 |
| JUNE 18 | 125 - 150,000 |
| JUNE 20 | 175 - 200,000 |
| JUNE 22 | 225 - 250,000 |
| JUNE 25 | 275 - 325,000 |
| JUNE 30 | 350 - 400,000 |

| DATE | LATE RUN - 250,000 ESCAPEMENT | |
|---------|---------------------------------|-------------------------------------|
| | EARLY ESCAPEMENT IS ACHIEVED | EARLY ESCAPEMENT IS NOT ACHIEVED |
| JULY 6 | - | 40,000 |
| JULY 8 | - | 45 - 50,000 |
| JULY 10 | 40,000 | 55 - 65,000 |
| JULY 12 | 50 - 60,000 | 70 - 75,000 |
| JULY 14 | 65 - 75,000 | 75 - 80,000 |
| JULY 16 | 80 - 90,000 | 80 - 90,000 |
| JULY 19 | 100 - 115,000 | 100 - 115,000 |
| JULY 21 | 125 - 135,000 | 125 - 135,000 |
| JULY 23 | 145 - 160,000 | 150 - 160,000 |
| JULY 26 | 170 - 180,000 | 170 - 180,000 |
| JULY 29 | 185 - 195,000 | 190 - 195,000 |
| JULY 31 | 195 - 200,000 | 195 - 200,000 |

6119

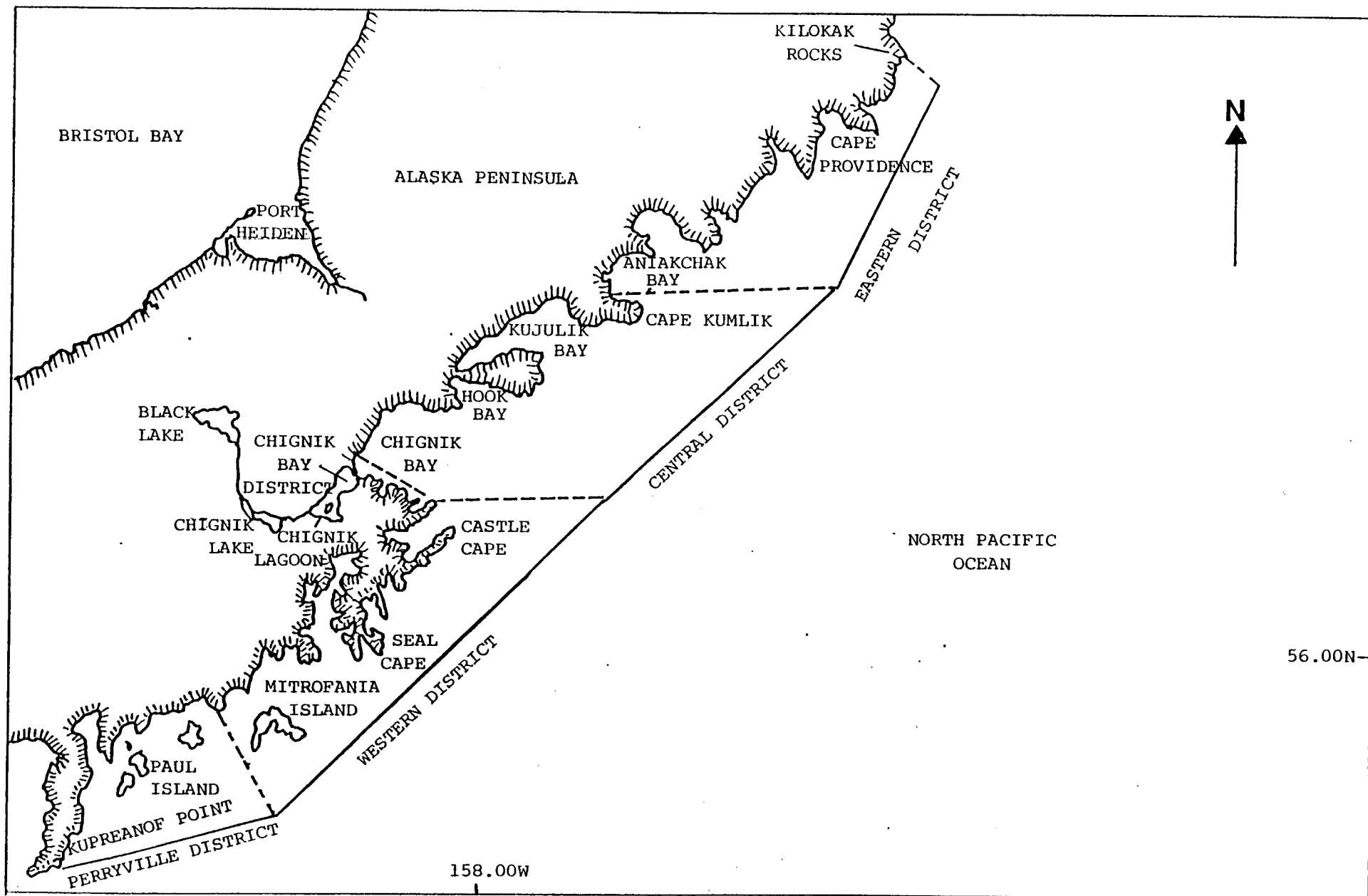


Figure 1 . Map of the Chignik Management Area illustrating district boundaries, 1993.

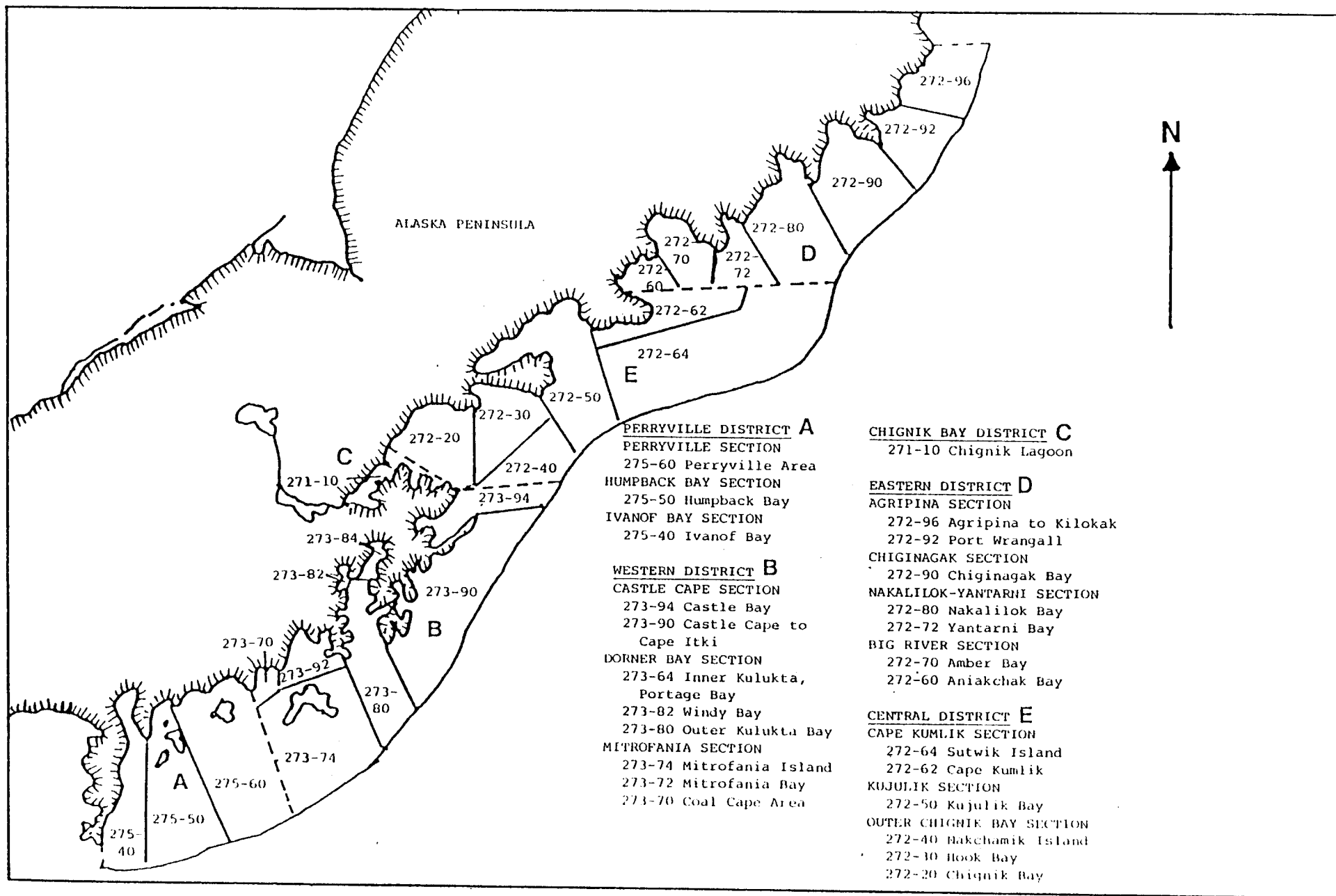


Figure 2 . Map of the Chignik Management Area illustrating statistical areas, 1993.

APPENDIX

Appendix A. Management guide for the Cape Igvak fishery, 1993.

The midpoint harvest figures for the 1993 Chignik sockeye runs are forecast to be 1.20 million for the first run and 0.70 million fish for the second run, or a projected total harvest of 1.94 million Chignik bound sockeye.

The Alaska Department of Fish and Game will manage the Cape Igvak fishery according to the plan adopted by the Board of Fisheries. Since the harvestable surplus is expected to be more than 600,000, the fishery at Cape Igvak can open when the fishery opens at Chignik. Approximately 48 hours notice will be given prior to the first Cape Igvak opening. At least a 24 hour notice will be given prior to the opening of any other fishing period, unless it is an extension of a fishing period in progress. Fishing periods will normally be at least 24 hours long and will begin at 12:01 A.M. If the first run fails, the Cape Igvak fishery will be curtailed in order to allow a minimum harvest in the Chignik Area of at least 300,000 sockeye through July if that many are surplus beyond escapement needs.

During the period from approximately June 26 to July 9, the strength of the second run of Chignik River system sockeye salmon cannot be evaluated at Chignik Lagoon. In order to prevent overharvest of the second run, commercial salmon fishing in the Cape Igvak Section will, at the department's discretion, be disallowed or severely restricted during this period.

Fishing time at Cape Igvak after July 8 will be dependent on the strength of the second run and on the Chignik Area catch during the first run.

When the second run appears strong enough for a fishery at Chignik, Cape Igvak could be opened only if at least 300,000 were harvested from the first run in the Chignik Area. The Department will then manage the fishery so that the number of sockeye salmon harvested in the Chignik Area for both runs combined will be at least 600,000 and the harvest in the Cape Igvak Section will approach as near as possible 15 percent of the total catch of Chignik bound sockeye, if that many fish are available surplus to the escapement needs.

Appendix B. Southeast District Mainland fishery management plan.

SOUTHEASTERN DISTRICT MAINLAND (ALASKA PENINSULA AREA)
SALMON MANAGEMENT PLAN, 1993

By

James N. McCullough
and
Rodney D. Campbell

Regional Information Report¹ No. 4K93-6

Alaska Department of Fish and Game
Division of Commercial Fisheries
211 Mission Road
Kodiak, Alaska

March 1993

¹The Regional Information Report Series was established in 1987 to provide an informational access system for all unpublished divisional reports. These reports frequently serve diverse ad hoc informational purposes or archive basic uninterpreted data. To accommodate timely reporting of recently collected information, reports in this series undergo only limited internal review and may contain preliminary data; this information may be subsequently finalized and published in the formal literature. Consequently, these reports should not be cited without prior approval of the author or the Division of Commercial Fisheries.

TABLE OF CONTENTS

| | <u>Page</u> |
|--------------------------------------|-------------|
| LIST OF TABLES | i |
| LIST OF FIGURES | i |
| LIST OF APPENDICES | i |
| MANAGEMENT PLAN | 1 |
| Southeastern District Mainland | 1 |
| Local Stocks | 6 |
| Northwest Stepovak Section | 6 |
| Stepovak Flats Section | 8 |
| LITERATURE CITED | 10 |
| APPENDIX | 11 |

LIST OF TABLES

| <u>Table</u> | <u>Page</u> |
|---|-------------|
| 1. Southeastern District Mainland fishery catch of Chignik destined sockeye salmon through July 25, 1983-92 | 4 |
| 2. Sockeye salmon escapement requirements for Orzinski Lake | 9 |

LIST OF FIGURES

| <u>Figure</u> | <u>Page</u> |
|--|-------------|
| 1. Map of the Alaska Peninsula Management Area with the Southeastern District Mainland area defined | 2 |
| 2. Map of the Southeastern District Mainland area from Kupreanof Point to McGinty Point with the salmon sections defined | 3 |
| 3. Map of Stepovak Bay with Dent Point defined | 7 |

LIST OF APPENDICES

| <u>Appendix</u> | <u>Page</u> |
|---|-------------|
| A. Southeastern District Salmon Management Plan | 12 |
| B. Chignik (Preliminary) Forecast of the 1993 Run | 14 |
| C. Application of Fishery Management Plans | 16 |

MANAGEMENT PLAN

Southeastern District Mainland

The Southeastern District Mainland (Balboa-Stepovak) fishery (Figure 1-2) will be managed according to the Southeastern District Management Plan (Appendix A) as adopted by the Alaska Board of Fisheries during the November 1991 meeting.

The East Stepovak, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Sections will be managed on the basis of the interception of Chignik River sockeye salmon. Orzinski Bay (all waters north of a line from Elephant Point 55°41'50" N.lat., 160°03'18" W.long. to Waterfall Point 55°43'10" N.lat., 160°01'08" W.long. as based on 1983 datum charts) in the Northwest Stepovak Section and the Stepovak Flats Section will be managed on a local stock basis, Orzinski Bay on the basis of the Orzinski Lake sockeye salmon stock and the Stepovak Flats Section on the basis of the Stepovak River chum salmon stock.

When possible, fishing periods in Orzinski Bay and Stepovak Flats will coincide with fishing periods in the remainder of the Southeastern District Mainland fishery to avoid concentrating fishing gear. Through July 25 (the time period covered by the Southeastern District Management Plan), no attempt will be made to coincide fishing periods in the Southeastern District Mainland area with any other nearby fisheries. All fishing periods will be announced by emergency orders. At least 36 hours notice will be given prior to the first commercial fishing period in the fishery. At least 24 hours notice will be given prior to the opening of any other fishing period, unless it is an extension of a fishing period in progress.

In the Southeastern District Mainland area, set gill net gear is the only legal gear type allowed through midnight July 10, while after July 10, set gill net, purse seine, and hand purse seine gear types are allowed.

The forecasted midpoint harvest for the Chignik sockeye salmon runs for 1993 are 1,200,000 salmon for the early run and 700,000 salmon for the second run (Appendix B). If the runs come in as expected and the goals of the management plan are achieved, about 100,000 estimated Chignik destined sockeye salmon will be harvested in the Southeastern District Mainland area prior to July 26. This compares to the recent five-year average of 79,792 and 10-year average of 136,573 (Table 1).

The total Chignik sockeye salmon catch is 100% of those sockeye salmon caught within the Chignik Management Area, plus 80% of those sockeye salmon caught in the Cape Igvak Section of the Kodiak Management Area, plus 80% of those sockeye salmon caught in the Southeastern District Mainland fishery excluding 100% of those sockeye salmon caught in Orzinski Bay.

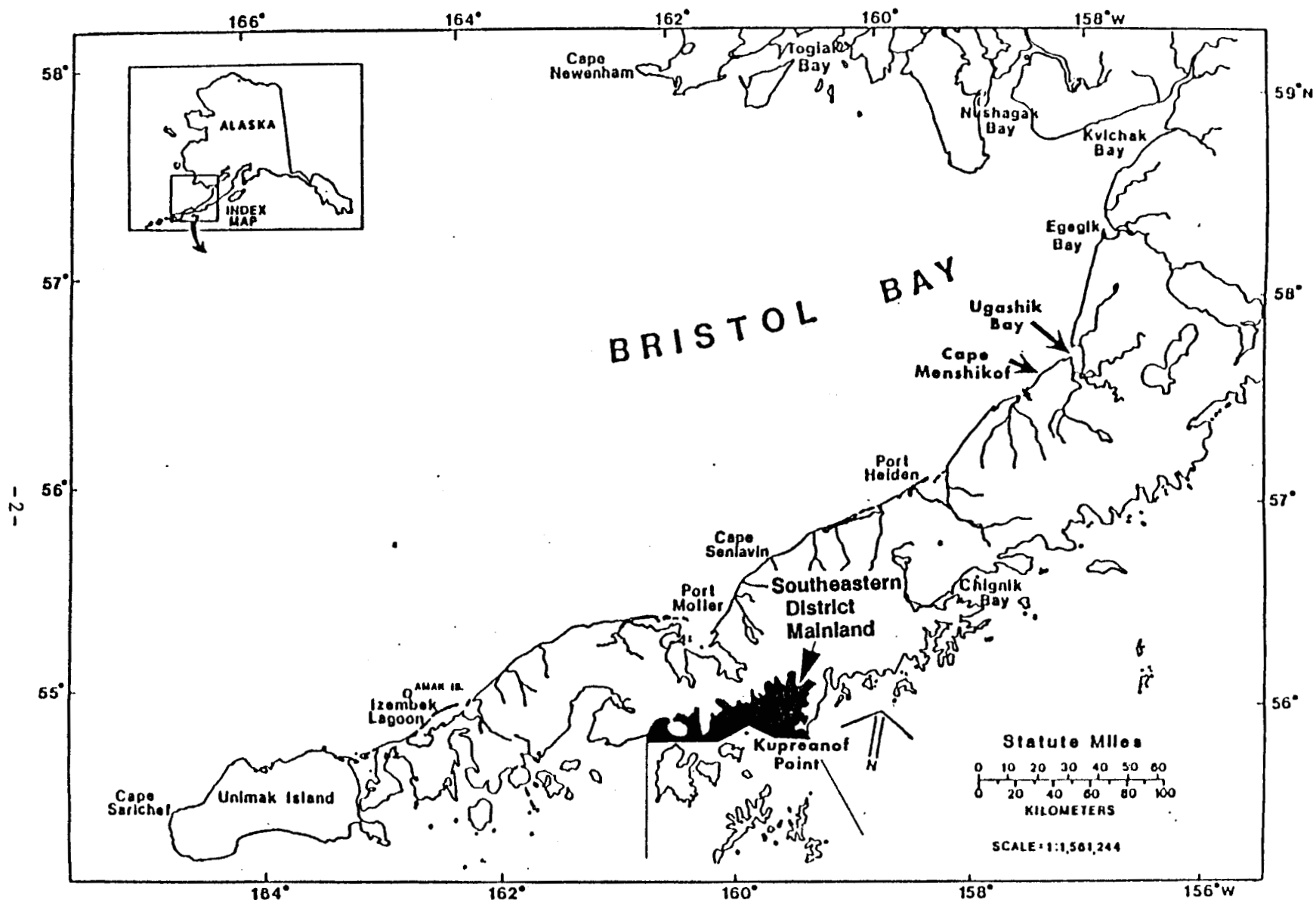


Figure 1. Map of the Alaska Peninsula Management Area with the Southeastern District Mainland area defined.

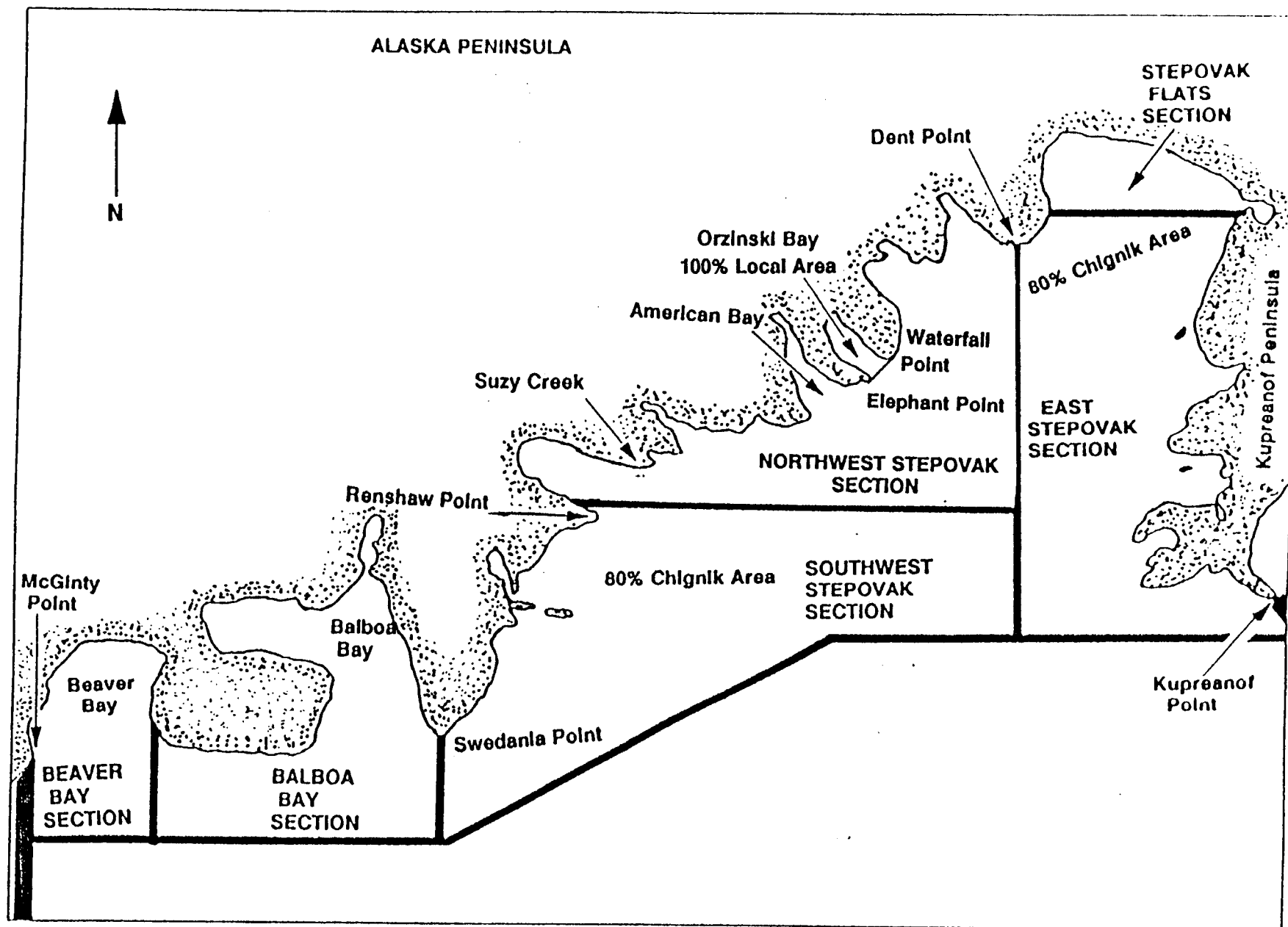


Figure 2. Map of the Southeastern District Mainland fishery from Kupreanof Point to McGinty Point with the salmon sections defined.

Table 1. Southeastern District Mainland fishery catch of Chignik destined sockeye salmon through July 25, 1983-92.¹

| Year | Number of Salmon | | | Chignik Bound Catch ¹ |
|----------|------------------|---------------------------------|--------------------------------------|----------------------------------|
| | Total Catch | Northwest Stepovak ² | Total Catch Minus Northwest Stepovak | |
| 1983 | 300,158 | 15,918 | 284,240 | 227,392 |
| 1984 | 595,043 | 66,209 | 528,834 | 423,067 |
| 1985 | 80,957 | 16,681 | 64,276 | 51,421 |
| 1986 | 206,532 | 59,025 | 147,507 | 118,006 |
| 1987 | 244,895 | 61,287 | 183,608 | 146,886 |
| 1988 | 81,160 | 57,010 | 24,150 | 19,320 |
| 1989 | 89,224 | 83,618 | 5,606 | 4,484 |
| 1990 | 164,028 | 3,279 | 160,749 | 128,599 |
| 1991 | 289,727 | 98,834 | 190,893 | 152,714 |
| 1992 | 215,444 | 98,138 | 117,306 | 93,845 |
| Average: | | | | |
| 5 Year | 167,917 | 68,176 | 99,741 | 79,792 |
| 10 Year | 226,717 | 56,000 | 170,717 | 136,573 |

¹From 1970-91, the Chignik contribution is 80% of the sockeye salmon harvested in Beaver Bay, Balboa Bay, Southwest Stepovak, Stepovak Flats, and East Stepovak Sections. In 1992, the Chignik contribution is 80% of the sockeye salmon harvested in the Southeastern District Mainland fishery except Orzinski Bay where 100% of the sockeye salmon are considered local production.

²From 1970-91, the Northwest Stepovak Section figures include the harvest from the entire Northwest Stepovak Section. In 1992 the figure includes only the Orzinski Bay harvest.

Because the harvestable surplus is expected to exceed 600,000 sockeye salmon, the Southeastern District Mainland fishery may open when the fishery opens in the Chignik Management Area. Based on the 1,200,000 sockeye salmon early run harvest forecast, it is possible that the first opening for the Southeastern District Mainland fishery could be in early to mid-June.

If the first run fails to develop as expected, the Southeastern District Mainland fishery will be curtailed in order to allow a minimum harvest in the Chignik Area of at least 300,000 sockeye through July 8, if that many salmon are surplus to escapement requirements.

During the period from about June 26 through July 9, the strength of the second run of Chignik River sockeye salmon cannot be evaluated at Chignik. To prevent over-harvest of the second run, commercial salmon fishing in the Southeastern District will, at the Alaska Department of Fish and Game's (ADF&G) discretion, be disallowed or severely restricted during this period.

After July 8, fishing time in the Southeastern District Mainland fishery will be dependent upon the strength of the second run as evaluated at Chignik and on the catch of Chignik bound sockeye during the first run at Cape Igvak, Chignik, and the Southeastern District Mainland fisheries. When the second run escapement goals are being met and the second run appears strong enough for a fishery at Chignik, the Southeastern District Mainland may open to commercial salmon fishing if at least 300,000 combined first and second run sockeye salmon were harvested in the Chignik Area. ADF&G will manage the fishery so that the number of sockeye salmon harvested in the Chignik Area from both runs combined will be at least 600,000 salmon and the harvest in the Southeastern District Mainland will approach as near as possible 7.0% of the total Chignik bound sockeye salmon catch (Appendix C), if that many sockeye salmon are surplus to escapement requirements.

The fishery shall be managed according to the plan as stated in the 1992-1994 Bristol Bay and Westward Alaska commercial salmon fishing regulation book (Appendix A). No attempt will be made to allow equal fishing time with Chignik, as had been done from 1974 through 1977, but rather the end goal will be to meet the 7.0% allocation level after the conditions of the management plan have been satisfied. An interim management goal of 7.0% at midnight July 10 will also be attempted after the conditions of the management plan have been satisfied. The interim management goal of 7.0% at midnight July 10 is desirable to achieve historical harvest levels between set gill net and purse seine fishermen; purse seine gear is legal in the fishery after July 10. To meet the goal of 7.0% by July 11 and July 25, the percentage may fluctuate above or below 7.0% prior to July 11 and July 25. Because of the restrictions placed upon the Southeastern District Mainland fishery to protect the Chignik runs, it may not be possible to achieve a 7.0% allocation level, even though escapement goals are met and the minimum catch level of 600,000 salmon at Chignik is exceeded.

The Southeastern District Mainland fishery is regulated by a management plan that is independent of other fisheries occurring in the Alaska Peninsula Management Area. Because the fishery is primarily effected by sockeye salmon catches in the Kodiak and Chignik Management Areas, while being independent of other Alaska Peninsula Management Area fisheries except for fishing effort, the Southeastern District Mainland area will have independent fishing periods from those in the Shumagin Islands Section and other areas of the South Peninsula. ADF&G will attempt to have fishing periods in Orzinski Bay and Stepovak Flats concurrent with other fishing periods in the Southeastern District Mainland area.

There has been confusion for several years concerning the definition of Dent Point. A map of the Dent Point area is found on Figure 3. The Alaska Board of Fisheries approved definition of Dent Point is 55° 47'15" N. lat., 159° 52'00" W. long. (based on 1983 datum chart). This definition of Dent Point will be used as: (1) the boundary between the Northwest Stepovak and Stepovak Flats Sections; (2) as one of the closed waters points for Stepovak Bay when the head of Stepovak Bay is closed from July 29 through September 30; and (3) whenever an ADF&G reference is made regarding Dent Point.

Local Stocks

Orzinski Bay in the Northwest Stepovak Section and the Stepovak Flats Section will be managed on a local stock basis. Orzinski Bay will be managed on the basis of the Orzinski Lake sockeye salmon stock from June 1 through about July 25, and after about July 25 on local sockeye and pink salmon runs. The Stepovak Flats Section will be managed on the basis of the Stepovak River chum salmon stock. The entire Southeastern District Mainland area will be managed on the basis of local stocks (sockeye, pink, chum, and coho salmon) after July 25.

Northwest Stepovak Section

The sockeye escapement goal for Orzinski (Orzenoi) Lake is 20,000 salmon as estimated from the production potential of the lake (A.R. Shaul, Alaska Department of Fish and Game, Kodiak, personnel communication). In 1992, the total estimated sockeye escapement was 25,000 salmon. ADF&G intends to operate a weir on the Orzinski system in 1993, similar to the 1992 weir.

A weir was used to count escapements into the lake from 1935 to 1941, and in 1990-92. The earliest recorded sockeye escapement occurred on June 11, 1940 (11 salmon), while the usual pattern of first entry into the lake is about June 17. July 17 is the average date of 50% cumulative sockeye escapement, while on the average

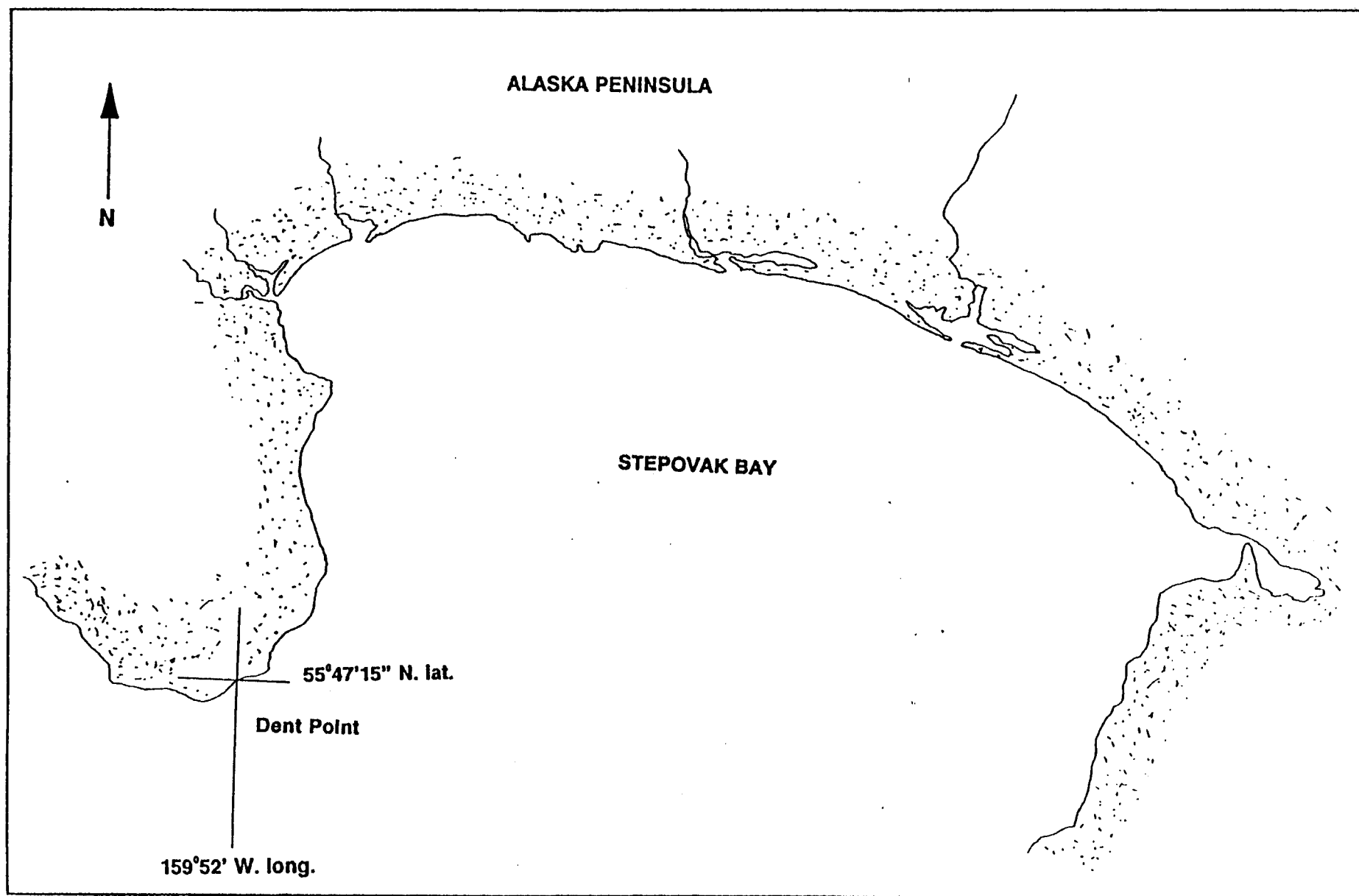


Figure 3. Map of Stepovak Bay with Dent Point defined.

99% of the escapement occurs by August 7. Based on aerial surveys and weir counts, sockeye salmon escapement requirements for Orzinski Lake by time periods has been developed (Table 2).

Through July 25, 1992, Orzinski Bay will have fishing periods basis on the Orzinski Lake sockeye salmon weir counts. Sockeye salmon caught within Orzinski Bay (north of a line from Elephant Point at 55°41'50" N.lat., 160°03'18" W.long. to Waterfall Point at 55°43'10" N.lat., 160°01'08" W.long.) will be allocated 100% to the Orzinski Lake run. Sockeye salmon caught in the remainder of the Southeastern District Mainland fishery will be allocated 80% to the Chignik system runs. After July 25, fishing time will be based on local sockeye, pink, chum, and coho salmon stocks. If the sockeye salmon escapement goals into Orzinski Lake are not met, Orzinski Bay will be closed north of a line from Elephant Point (55°41'50" N.lat., 160°03'18" W.long.) to Waterfall Point (55°43'10" N.lat., 160°01'08" W.long.), until management of the bay shifts to pink salmon.

Stepovak Flats Section

The Stepovak Flats Section will be managed on the basis of the chum salmon run into Stepovak River (local stock basis). Through July 11, this section will open to commercial salmon fishing on a day per day basis with the remainder of the Southeastern District Mainland fishery. Sockeye harvested in this section will be assigned as 80% Chignik bound and are included as part of the 7.0% allocation criteria set forth in the Southeastern District Mainland management plan. After July 10, the Stepovak Flats Section will be managed on the basis of the chum salmon run into Stepovak River. Fishermen are reminded that this section is usually closed to commercial salmon fishing from July 29 through September 30 (5 AAC 09.350(23)).

Table 2. Sockeye salmon escapement requirements for Orzinski Lake.

| Time Period | Cumulative Escapement Goal |
|--------------|----------------------------|
| June 15 | 0 |
| July 1 | 2,000 |
| July 9 | 5,000 |
| July 16 | 10,000 |
| July 23 | 15,000 |
| August 7 | 20,000 |
| Season Total | 20,000 |

LITERATURE CITED

ADF&G (Alaska Department of Fish and Game). 1992. 1992-1994 Bristol Bay and Westward Alaska commercial fishing regulations salmon and miscellaneous finfish, 1992 edition. Alaska Department of Fish and Game, Division of Commercial Fisheries, Juneau.

Shaul, A.R., J.N. McCullough, M.E. Stopha, R.S. Bercelli, R.L. Murphy, R.D. Campbell, and P.B. Holmes. *In Press*. Alaska Peninsula, Aleutian Islands, and Atka-Amlia Management Areas Salmon Annual Management Report, 1992. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report, Kodiak.

APPENDIX

APPENDIX A: SOUTHEASTERN DISTRICT SALMON MANAGEMENT PLAN

5 AAC 09.360. SOUTHEASTERN DISTRICT SALMON MANAGEMENT PLAN

(a) This plan pertains to the management of the interception of Chignik River sockeye salmon caught in the Southeastern District Mainland fishery: East Stepovak, Stepovak Flats, Northwest Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections. Before July 11, only set gill net gear may be used in these sections. For the purpose of this plan, local runs include only those salmon in the waters:

1) north of a line in Orzinski Bay from Elephant Point (55° 41'50" N.lat., 160° 03'18" W.long.) to Waterfall Point (55° 43'10" N.lat., 160° 01'08" W.long.) and:

2) the Stepovak Flats Section as described in 5 AAC 09.200(f).

(b) In years when a harvestable surplus for the first (Black Lake) and second (Chignik Lake) runs of Chignik River system sockeye salmon is expected to be less than 600,000, no commercial salmon fishery is allowed in the East Stepovak, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Sections, as described in 5 AAC 09.200(f), until a harvest of 300,000 sockeye salmon in the Chignik Area, as described in 5 AAC 15.100, is achieved. After July 8, if at least 300,000 sockeye salmon have been harvested in the Chignik Area, and if escapement goals are being met, the department shall manage the fishery so that the number of sockeye salmon harvested in the Chignik Area will be at least 600,000 and the East Stepovak, Stepovak Flats, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Sections approaches as near as possible seven percent of the total Chignik sockeye salmon catch.

(c) In years when a harvestable surplus beyond escapement goals for the first and second runs of Chignik River system sockeye salmon is expected to be more than 600,000 but the first run fails to develop as predicted and it is determined that a total sockeye salmon harvest in the Chignik Area of 600,000 or more may not be achieved, the commercial salmon fishery in the East Stepovak, Stepovak Flats, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Sections must be curtailed in order to allow at least a minimum harvest in the Chignik Area of 300,000 sockeye salmon by July 9 if that number of fish are determined to be surplus to the escapement goals of the Chignik River system. After July 8, if at least 300,000 sockeye salmon have been harvested in the Chignik Area, and if escapement goals are being met, the department shall manage the fishery so that the number of sockeye salmon harvested in the Chignik Area is at least 600,000 and the East Stepovak, Stepovak Flats, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Sections approaches as near as possible seven percent of the total Chignik sockeye salmon catch.

(d) In years when a harvestable surplus beyond the escapement goals for the first and second runs of Chignik River system sockeye salmon is expected to be more than 600,000 and the department determines that the runs are as strong as expected, the department shall manage the fishery so that the number of sockeye salmon taken in the East Stepovak, Stepovak Flats, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Sections approaches as near as possible seven percent of the total Chignik sockeye salmon catch.

(e) The estimate of sockeye salmon destined for the Chignik River has been determined to be 80 percent of the sockeye salmon harvested in the East Stepovak, Stepovak Flats, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Sections. The remaining sockeye salmon taken in the Southeastern District Mainland fishery have been determined to be destined for Orzinski Bay.

(f) The total Chignik sockeye salmon catch constitutes those sockeye salmon caught within the Chignik Area, plus 80 percent of the sockeye salmon caught in the East Stepovak, Stepovak Flats, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Sections, as described in 5 AAC 09.200(f), plus 80 percent of the sockeye salmon caught in the Cape Igvak Section of the Kodiak Area. The percentage of Chignik sockeye salmon may be permitted to fluctuate above or below seven percent at any time before July 25.

(g) This allocation method is in effect through July 25. The first fishing period of the commercial salmon fishing season in the East Stepovak, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Sections may not occur before the first fishing period of the commercial salmon fishing season in the Chignik Area. After July 25, commercial salmon fishing in the entire Southeastern District Mainland area may be allowed on local stocks.

(h) During the period from approximately June 26 to July 9, the strength of the second run of the Chignik River system sockeye salmon cannot be evaluated. In order to prevent over-harvest of the second run, the department may disallow or severely restrict commercial salmon fishing in the East Stepovak, Stepovak Flats, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Section during this period.

(i) The department shall announce all commercial salmon fishing periods by emergency order. The department shall give at least 24 hour notice before the opening of a commercial salmon fishing period, unless it is an extension of a fishing period in progress.

APPENDIX B: CHIGNIK MANAGEMENT AREA PRELIMINARY SOCKEYE FORECAST

CHIGNIK MANAGEMENT AREA PRELIMINARY SOCKEYE FORECAST

FORECAST AREA: Chignik Management Area

SPECIES: Sockeye Salmon

PRELIMINARY FORECAST OF THE 1993 RUN

| <u>Early Run (Black Lake)</u> | <u>Point Estimate</u> | <u>80% Prediction Forecast Range</u> |
|--------------------------------|-----------------------|--------------------------------------|
| Escapement Goal: | 400,000 | |
| Harvest Estimate: | 1,200,000 | |
| Return Estimate: | 1,640,000 | 1,120,000 - 2,160,000 |
| <u>Late Run (Chignik Lake)</u> | | |
| Escapement Goal: | 250,000 | |
| Harvest Estimate: | 700,000 | |
| Return Estimate: | 950,000 | 620,000 - 1,620,000 |
| <u>Total Chignik Run</u> | | |
| Escapement Goal: | 650,000 | |
| Harvest Estimate: | 1,900,000 | |
| Return Estimate: | 2,590,000 | 1,740,000 - 3,780,000 |

FORECAST METHODS:

The estimated run to Black Lake is the sum of a regression estimate for two major age classes (ages 1.3 and 2.3) and a 10-year average for minor age classes, while the Chignik Lake run is based on a recruit per spawner relationship. The Black Lake forecast is based on the historical relationship between the number and length of prior year age 1.2 fish, and the parent year escapement number. All other age classes are predicted from a 10-year average. The Chignik Lake forecast accuracy has historically been quite variable and developing a model such as the one used for the Black Lake run has been unsuccessful. The Chignik Lake run forecast for 1993 was derived using an average return per spawner ($R/S = 4.41$) for years post-1969.

DISCUSSION OF THE 1993 FORECAST:

Early Run

The 1993 Black Lake sockeye salmon run is expected to be 1.64 million fish. This is approximately 0.10 million fish less than the 1982-91 average run of 1.74 million fish and 200,000 fish less than the 1992 forecast. This below average run is expected because in 1992 age 1.2 fish numbered 33,005 less than the 10 year average of 175,456.

Late Run

The estimated 1993 Chignik Lake sockeye run is 0.95 million fish, 20,000 less than the 1982-91 average of 1.15 million fish. The Chignik Lake run forecast accuracy has historically been quite poor when compared to actual returns. The 1987 parent year, which is expected to produce 60% of the 1993 run, was 35,548 below the 250,000 desired escapement goal.

Prepared By:

Alan Quimby
Area Management Biologist
Chignik Area ADF&G

Dave Owen
Assistant Area Biologist
Chignik Area ADF&G

APPENDIX C: APPLICATION OF FISHERY MANAGEMENT PLANS

5 AAC 39.200 APPLICATION OF FISHERY MANAGEMENT PLANS

(a) The Board of Fisheries has implemented by regulation fishery management plans that provide the Department of Fish and Game with guidelines to be followed when making management decisions regarding the state's subsistence, commercial, sport and personal use fisheries. The primary goal of these management plans is to protect the sustained yield of the state's fishery resources while at the same time providing an equitable distribution of the available harvest between various users. The regulations contained in this section are intended to aid in the achievement of that goal and therefore will apply to all fishery management plans contained in 5 AAC 03-5 AAC 39.

(b) In some fishery management plans, the distribution of harvestable fish between various users is determined by the harvest that occurs during a specific time period, at a specific location, or by a specific group or groups of users. At times fishermen, due to circumstances that are beyond the control of the department, such as weather or price disputes, will not harvest fish. When this happens in a fishery governed by a management plan, the goals of the plan may not be achieved. Therefore, when a fishery is open to the taking of fish and the group or groups of users whose catch determines the distribution of the harvest as set out in the applicable management plan are not taking the harvestable fish available to them, the department shall manage the fishery as if the available harvest is being taken. When determining the available harvest, the department shall consider the number of fish needed to meet spawning requirements, the number of fish present in the fishery and in spawning areas that are in excess to spawning requirements, and the estimated harvesting capacity of the group or groups of users that would normally participate in the fishery.

Appendix C.1. Total sockeye return to Black Lake by brood year and age, 1915 - 1993.

| Year | Parent Year Escapment | Age | | | | | | | | | | | | Total | Return Per Spawner |
|------|-----------------------------|-----|-----|-----|---------|-----|-----------|---------|---------|---------|-------|-------|-------|-------|--------------------------|
| | | 0.2 | 1.1 | 0.3 | 1.2 | 2.1 | 1.3 | 2.2 | 1.4 | 2.3 | 3.2 | 2.4 | 3.3 | Other | |
| 1915 | | | | | | | | | | | | 1,202 | 1,202 | | 2,404 |
| 1916 | | | | | | | | | 9,315 | 68,559 | 37 | 15 | 0 | | 77,926 |
| 1917 | | | | | | | 318,491 | 20,666 | 576 | 18,747 | 0 | 0 | 0 | 0 | 358,480 |
| 1918 | | | | 0 | 12,960 | 0 | 43,803 | 6,984 | 0 | 49,097 | 0 | 0 | 138 | 0 | 112,982 |
| 1919 | | 0 | 0 | 0 | 15,073 | 0 | 92,073 | 28,499 | 16 | 74,062 | 30 | 0 | 324 | 0 | 210,077 |
| 1920 | | 0 | 0 | 0 | 63,251 | 0 | 422,288 | 28,279 | 0 | 111,422 | 6,511 | 0 | 273 | 0 | 632,024 |
| 1921 | | 0 | 0 | 0 | 122,550 | 0 | 258,628 | 113,493 | 5,873 | 255,927 | 0 | 0 | 0 | 0 | 756,471 |
| 1922 | 86,421 | 0 | 0 | 0 | 40,685 | 0 | 659,040 | 56,121 | 0 | 202,612 | 2,465 | 1,222 | 1,669 | 0 | 963,814 |
| 1923 | 4,642 | 0 | 0 | 0 | 18,213 | 0 | 172,343 | 53,445 | 2,677 | 132,776 | 410 | 436 | 59 | 0 | 380,359 |
| 1924 | 121,983 | 0 | 0 | 0 | 85,083 | 0 | 1,206,555 | 8,855 | 426 | 19,931 | 939 | 384 | 384 | 0 | 1,322,557 |
| 1925 | 386,364 | 0 | 0 | 0 | 1,529 | 0 | 54,164 | 9,924 | 384 | 50,707 | 937 | 17 | 0 | 0 | 117,662 |
| 1926 | 289,009 | 0 | 0 | 0 | 7,544 | 420 | 104,094 | 45,572 | 11,714 | 352,025 | 7,117 | 0 | 1,708 | 0 | 530,194 |
| 1927 | 857,881 | 0 | 0 | 0 | 99,929 | 66 | 2,375,878 | 85,253 | 721 | 107,239 | 165 | 3,699 | 4,234 | 0 | 2,677,184 |
| 1928 | 507,353 | 0 | 0 | 0 | 23,860 | 0 | 304,338 | 49,284 | 9,848 | 428,369 | 2,755 | 409 | 2,118 | 0 | 820,981 |
| 1929 | 995,832 | 0 | 0 | 0 | 9,910 | 0 | 918,487 | 58,777 | 5,626 | 60,214 | 865 | 144 | 144 | 0 | 1,054,167 |
| 1930 | 92,955 | 0 | 0 | 0 | 23,769 | 0 | 286,339 | 13,886 | 6,663 | 43,297 | 3,527 | 4 | 0 | 0 | 377,485 |
| 1931 | 96,201 | 0 | 0 | 0 | 33,685 | 943 | 923,763 | 46,710 | 28 | 122,389 | 0 | 655 | 58 | 0 | 1,128,231 |
| 1932 | 2,151,734 | 0 | 0 | 0 | 50,602 | 0 | 191,354 | 36,823 | 10,350 | 43,060 | 291 | 8,584 | 234 | 0 | 341,298 |
| 1933 | 223,913 | 0 | 0 | 0 | 62,079 | 0 | 247,818 | 7,609 | 138,675 | 164,540 | 0 | 625 | 54 | 0 | 621,400 |
| 1934 | 866,890 | 0 | 0 | 0 | 16,228 | 4 | 1,583,632 | 6,057 | 9,886 | 40,971 | 276 | 1,299 | 113 | 0 | 1,658,466 |
| 1935 | 194,636 | 0 | 10 | 0 | 68,710 | 0 | 235,971 | 7,188 | 20,562 | 85,058 | 572 | 1,508 | 130 | 0 | 419,709 |
| 1936 | 548,039 | 0 | 0 | 0 | 15,422 | 3 | 490,061 | 14,873 | 23,865 | 98,553 | 661 | 2,346 | 201 | 0 | 645,985 |
| 1937 | 205,613 | 0 | 9 | 0 | 32,001 | 7 | 567,984 | 17,179 | 37,146 | 153,156 | 1,026 | 960 | 82 | 0 | 809,550 |
| 1938 | 175,972 | 0 | 19 | 0 | 37,059 | 7 | 882,938 | 26,618 | 15,193 | 62,552 | 418 | 706 | 60 | 0 | 1,025,570 |
| 1939 | 1,142,852 | 0 | 22 | 0 | 57,563 | 12 | 360,712 | 10,840 | 11,171 | 45,926 | 307 | 2,470 | 209 | 0 | 489,232 |
| 1940 | 176,307 | 0 | 35 | 0 | 23,499 | 5 | 264,904 | 7,938 | 39,130 | 160,651 | 1,070 | 7,513 | 634 | 0 | 505,379 |
| 1941 | 374,420 | 0 | 14 | 0 | 17,246 | 3 | 926,890 | 27,697 | 119,048 | 488,137 | 3,247 | 1,196 | 101 | 0 | 1,583,579 |
| 1942 | 442,981 | 0 | 11 | 0 | 60,302 | 12 | 2,817,023 | 83,954 | 18,948 | 77,598 | 515 | 684 | 58 | 0 | 3,059,105 |
| 1943 | 701,859 | 0 | 36 | 0 | 183,156 | 37 | 447,919 | 13,315 | 10,839 | 44,522 | 297 | 499 | 38 | 0 | 700,658 |
| 1944 | 291,844 | 0 | 111 | 0 | 29,106 | 6 | 256,848 | 7,683 | 7,947 | 31,664 | 203 | 482 | 43 | 0 | 334,093 |
| 1945 | 217,882 | 0 | 18 | 0 | 16,715 | 3 | 183,734 | 5,143 | 7,619 | 31,784 | 216 | 275 | 27 | 0 | 245,534 |
| 1946 | 774,130 | 0 | 10 | 0 | 11,775 | 2 | 182,835 | 5,644 | 4,307 | 18,686 | 133 | 707 | 64 | 0 | 224,163 |
| 1947 | 2,386,733 | 0 | 7 | 0 | 11,988 | 2 | 106,718 | 3,550 | 11,150 | 46,809 | 320 | 525 | 43 | 0 | 181,112 |
| 1948 | 384,637 | 0 | 7 | 0 | 7,129 | 1 | 268,953 | 8,407 | 8,346 | 33,877 | 223 | 352 | 0 | 0 | 327,295 |
| 1949 | 213,269 | 0 | 4 | 0 | 17,688 | 4 | 195,878 | 5,713 | 0 | 89,095 | 0 | 0 | 152 | 0 | 308,534 |
| 1950 | 206,270 | 0 | 11 | 0 | 12,671 | 3 | 287,407 | 12,644 | 1,862 | 76,722 | 648 | 373 | 286 | 0 | 392,627 |
| 1951 | 125,126 | 0 | 8 | 0 | 46,798 | 0 | 448,360 | 3,404 | 2,319 | 124,345 | 0 | 455 | 0 | 0 | 625,689 |
| 1952 | 34,155 | 0 | 0 | 0 | 4,390 | 0 | 137,957 | 3,423 | 208 | 81,691 | 0 | 639 | 2,512 | 0 | 230,820 |
| 1953 | 168,375 | 0 | 0 | 0 | 1,024 | 32 | 154,589 | 17,848 | 1,625 | 180,887 | 252 | 0 | 1,350 | 0 | 357,607 |
| 1954 | 184,953 | 0 | 143 | 0 | 6,468 | 0 | 50,272 | 10,720 | 515 | 72,973 | 9 | 312 | 1,009 | 0 | 142,421 |
| 1955 | 256,757 | 0 | 783 | 0 | 30,302 | 0 | 430,793 | 3,476 | 339 | 88,693 | 109 | 0 | 0 | 0 | 554,495 |
| 1956 | 289,096 | 0 | 17 | 0 | 16,499 | 0 | 81,569 | 14,910 | 9 | 90,001 | 0 | 196 | 4,967 | 0 | 208,168 |
| 1957 | 192,479 | 0 | 0 | 0 | 6,559 | 161 | 117,979 | 10,507 | 52 | 210,686 | 3,641 | 21 | 906 | 0 | 350,512 |

-Continued-

Appendix C.1. (page 2 of 2)

| Year | Parent Year Escapment | Age | | | | | | | | | | | | | Total | Return Per Spawner |
|------|-----------------------------|-------|-------|---------|---------|-------|-----------|---------|--------|---------|--------|-------|--------|--------|-----------|--------------------------|
| | | 0.2 | 1.1 | 0.3 | 1.2 | 2.1 | 1.3 | 2.2 | 1.4 | 2.3 | 3.2 | 2.4 | 3.3 | Other | | |
| 1958 | 120,862 | 0 | 905 | 0 | 19,146 | 0 | 79,955 | 81,992 | 0 | 60,132 | 77 | 61 | 103 | 0 | 242,370 | 2.0 |
| 1959 | 112,226 | 0 | 1,522 | 0 | 31,039 | 142 | 148,403 | 13,872 | 402 | 144,581 | 874 | 58 | 54 | 0 | 340,947 | 3.0 |
| 1960 | 251,567 | 0 | 124 | 0 | 55,546 | 221 | 610,592 | 32,598 | 6,221 | 65,418 | 49 | 606 | 3,383 | 0 | 774,756 | 3.1 |
| 1961 | 140,714 | 0 | 276 | 0 | 14,301 | 1 | 387,053 | 3,483 | 536 | 164,278 | 486 | 1,020 | 209 | 0 | 571,645 | 4.1 |
| 1962 | 167,602 | 0 | 698 | 0 | 8,379 | 0 | 257,371 | 25,726 | 3,194 | 395,626 | 1,524 | 954 | 0 | 0 | 693,473 | 4.1 |
| 1963 | 332,536 | 0 | 0 | 0 | 29,538 | 173 | 448,298 | 17,628 | 905 | 199,104 | 0 | 2,506 | 551 | 0 | 698,703 | 2.1 |
| 1964 | 137,073 | 0 | 37 | 0 | 13,311 | 3,735 | 190,972 | 133,203 | 3,809 | 409,973 | 414 | 0 | 271 | 0 | 755,726 | 5.5 |
| 1965 | 307,192 | 0 | 394 | 0 | 102,570 | 421 | 1,535,858 | 80,851 | 3,332 | 201,220 | 271 | 497 | 22,731 | 0 | 1,948,144 | 6.3 |
| 1966 | 383,545 | 0 | 1,631 | 0 | 65,254 | 378 | 990,567 | 15,248 | 2,193 | 225,660 | 28 | 0 | 2,504 | 0 | 1,303,463 | 3.4 |
| 1967 | 328,000 | 0 | 2,728 | 0 | 16,157 | 163 | 99,357 | 6,078 | 13,406 | 96,629 | 1,537 | 0 | 0 | 0 | 236,054 | 0.7 |
| 1968 | 342,343 | 0 | 271 | 0 | 12,997 | 0 | 971,408 | 4,519 | 2,163 | 161,664 | 1,960 | 0 | 1,663 | 0 | 1,156,644 | 3.4 |
| 1969 | 366,589 | 0 | 0 | 0 | 12,747 | 153 | 279,429 | 63,258 | 1,313 | 84,120 | 486 | 0 | 2,251 | 0 | 443,757 | 1.2 |
| 1970 | 536,257 | 0 | 0 | 0 | 17,281 | 261 | 195,050 | 8,163 | 4,614 | 192,247 | 621 | 0 | 3,698 | 0 | 421,934 | 0.8 |
| 1971 | 671,668 | 0 | 569 | 0 | 22,138 | 0 | 800,515 | 67,483 | 3,873 | 454,039 | 385 | 264 | 6,763 | 0 | 1,356,029 | 2.0 |
| 1972 | 326,320 | 0 | 0 | 0 | 31,630 | 0 | 423,794 | 16,474 | 3,195 | 587,997 | 4,596 | 831 | 2,564 | 0 | 1,071,082 | 3.3 |
| 1973 | 533,047 | 0 | 0 | 0 | 19,627 | 0 | 753,970 | 121,231 | 0 | 324,538 | 1,425 | 511 | 1,812 | 0 | 1,223,113 | 2.3 |
| 1974 | 351,701 | 0 | 51 | 0 | 50,797 | 334 | 123,590 | 117,544 | 116 | 305,094 | 551 | 452 | 2,727 | 0 | 601,256 | 1.7 |
| 1975 | 308,914 | 0 | 0 | 0 | 19,977 | 1,826 | 71,732 | 55,434 | 1,010 | 447,233 | 1,057 | 396 | 34 | 2,437 | 601,137 | 1.9 |
| 1976 | 551,254 | 0 | 520 | 0 | 44,085 | 88 | 669,395 | 24,810 | 816 | 135,036 | 0 | 0 | 334 | 11,778 | 886,860 | 1.6 |
| 1977 | 482,247 | 0 | 102 | 0 | 59,211 | 389 | 1,687,898 | 12,701 | 6,990 | 337,281 | 0 | 3,492 | 1,655 | 44,852 | 2,154,571 | 4.5 |
| 1978 | 458,660 | 0 | 235 | 0 | 55,123 | 3,060 | 448,274 | 61,734 | 6,664 | 354,902 | 0 | 0 | 210 | 15,138 | 945,339 | 2.1 |
| 1979 | 385,694 | 0 | 1,241 | 0 | 533,050 | 671 | 3,195,846 | 57,155 | 4,133 | 68,046 | 223 | 422 | 805 | 1,350 | 3,862,941 | 10.0 |
| 1980 | 311,332 | 0 | 255 | 120,421 | 99,989 | 1,187 | 641,668 | 151,574 | 1,503 | 741,614 | 2,098 | 943 | 1,113 | 4,847 | 1,767,213 | 5.7 |
| 1981 | 438,540 | 0 | 532 | 0 | 155,923 | 1,112 | 938,072 | 75,567 | 4,289 | 664,383 | 510 | 1,112 | 259 | 2,819 | 1,844,578 | 4.2 |
| 1982 | 616,117 | 0 | 121 | 0 | 172,993 | 2,021 | 1,627,753 | 134,483 | 2,133 | 391,690 | 0 | 394 | 0 | 194 | 2,331,780 | 3.8 |
| 1983 | 426,177 | 0 | 0 | 19,136 | 79,674 | 3,905 | 209,772 | 37,475 | 285 | 211,457 | 2 | 3,596 | 0 | 466 | 565,767 | 1.3 |
| 1984 | 597,712 | 478 | 2,279 | 1,225 | 46,148 | 2,194 | 324,901 | 42,078 | 2,605 | 210,908 | 1,216 | 703 | 2,461 | 0 | 637,196 | 1.1 |
| 1985 | 377,516 | 156 | 501 | 510 | 36,677 | 638 | 376,202 | 73,568 | 20,665 | 249,837 | 1,091 | 1,202 | 9,240 | 3,500 | 773,787 | 2.0 |
| 1986 | 566,088 | 384 | 1,517 | 6,384 | 342,057 | 0 | 1,893,213 | 55,260 | 2,978 | 203,218 | 11,147 | 5,791 | 1,147 | 45 | 2,523,141 | 4.5 |
| 1987 | 589,291 | 2,325 | 0 | 961 | 145,616 | 1,027 | 727,158 | 75,666 | 8,944 | 433,856 | 2,904 | | | 745 | | |
| 1988 | 420,577 | 0 | 1,467 | 670 | 70,153 | 1,885 | 491,967 | 122,690 | | | | | | 256 | | |
| 1989 | 384,004 | 32 | 4,416 | 5,832 | 213,429 | 2,749 | | | | | | | | | | |
| 1990 | 434,543 | 1,004 | 557 | | | | | | | | | | | | | |
| 1991 | 657,511 | | | | | | | | | | | | | | | |
| 1992 | 360,681 | | | | | | | | | | | | | | | |
| 1993 | 364,263 | | | | | | | | | | | | | | | |

Appendix C.2. Total sockeye return to Chignik Lake by brood year and age, 1915 - 1993.

| Year | Parent Escapment | Age | | | | | | | | | | | | | | Total | Return Per Spawner |
|------|------------------|-----|-------|-----|---------|-------|-----------|---------|-----|--------|---------|--------|--------|-------|-------|-----------|--------------------|
| | | 0.2 | 1.1 | 0.3 | 1.2 | 2.1 | 1.3 | 2.2 | 3.1 | 1.4 | 2.3 | 3.2 | 2.4 | 3.3 | other | | |
| 1915 | | | | | | | | | | | | | 4,514 | 4,514 | | 9,028 | |
| 1916 | | | | | | | | | | 11,874 | 690,450 | 9,120 | 2,007 | 0 | 0 | 713,451 | |
| 1917 | | | | | | | 339,637 | 149,163 | 0 | 296 | 274,036 | 0 | 0 | 0 | 0 | 763,132 | |
| 1918 | | | | 0 | 44,358 | 0 | 201,318 | 195,611 | 0 | 0 | 999,888 | 0 | 2,948 | 2,966 | 0 | 1,447,089 | |
| 1919 | | 0 | 0 | 0 | 100,404 | 2,425 | 243,024 | 286,119 | 0 | 2,492 | 423,094 | 8,270 | 0 | 5,828 | 0 | 1,071,656 | |
| 1920 | | 0 | 0 | 0 | 148,914 | 0 | 435,826 | 137,704 | 0 | 2,509 | 300,319 | 20,713 | 0 | 1,567 | 0 | 1,047,552 | |
| 1921 | | 0 | 0 | 0 | 101,251 | 0 | 216,728 | 278,711 | 0 | 4,085 | 193,620 | 2,245 | 955 | 3,396 | 0 | 800,991 | |
| 1922 | 352,807 | 0 | 0 | 0 | 43,667 | 0 | 382,956 | 73,351 | 0 | 0 | 991,979 | 14,972 | 2,886 | 4,175 | 0 | 1,513,986 | 4.3 |
| 1923 | 213,781 | 0 | 0 | 0 | 74,884 | 218 | 410,194 | 245,187 | 0 | 2,360 | 577,390 | 1,111 | 1,647 | 2,376 | 0 | 1,315,367 | 6.2 |
| 1924 | 910,521 | 0 | 0 | 0 | 126,685 | 1,819 | 1,003,422 | 8,350 | 0 | 1,115 | 102,217 | 5,830 | 425 | 55 | 0 | 1,249,918 | 1.4 |
| 1925 | 677,566 | 0 | 0 | 0 | 3,736 | 0 | 51,222 | 195,414 | 0 | 332 | 427,580 | 7,817 | 5,367 | 456 | 0 | 691,924 | 1.0 |
| 1926 | 695,314 | 0 | 0 | 0 | 25,764 | 919 | 279,018 | 304,619 | 273 | 3,461 | 879,220 | 3,821 | 55 | 2,246 | 0 | 1,499,396 | 2.2 |
| 1927 | 429,525 | 0 | 207 | 0 | 113,952 | 1,499 | 951,950 | 100,633 | 0 | 744 | 203,942 | 1,586 | 1,225 | 5,557 | 0 | 1,381,295 | 3.2 |
| 1928 | 1,020,520 | 0 | 0 | 0 | 40,063 | 0 | 353,506 | 77,224 | 0 | 12,047 | 300,603 | 3,129 | 1,042 | 1,618 | 0 | 789,232 | 0.8 |
| 1929 | 914,307 | 0 | 0 | 0 | 16,254 | 0 | 584,561 | 38,873 | 253 | 5,675 | 361,557 | 1,165 | 2,192 | 1,251 | 0 | 1,011,781 | 1.1 |
| 1930 | 359,405 | 0 | 0 | 0 | 26,688 | 0 | 426,128 | 41,867 | 0 | 6,177 | 344,419 | 16,565 | 2,065 | 0 | 0 | 863,909 | 2.4 |
| 1931 | 631,986 | 0 | 0 | 0 | 30,856 | 2,454 | 296,899 | 138,440 | 0 | 3,747 | 264,858 | 0 | 2,678 | 635 | 0 | 740,567 | 1.2 |
| 1932 | 1,113,859 | 0 | 0 | 0 | 24,809 | 0 | 475,759 | 46,764 | 0 | 8,530 | 185,288 | 2,049 | 13,674 | 1,502 | 0 | 758,375 | 0.7 |
| 1933 | 310,088 | 0 | 0 | 0 | 35,679 | 0 | 311,946 | 35,705 | 0 | 48,795 | 321,467 | 0 | 1,267 | 301 | 0 | 755,160 | 2.4 |
| 1934 | 447,642 | 0 | 0 | 0 | 19,716 | 90 | 708,212 | 33,934 | 0 | 4,066 | 88,027 | 969 | 4,299 | 1,026 | 0 | 860,339 | 1.9 |
| 1935 | 462,469 | 0 | 69 | 0 | 37,642 | 308 | 148,352 | 16,893 | 0 | 13,842 | 299,288 | 3,284 | 4,082 | 976 | 0 | 524,736 | 1.1 |
| 1936 | 376,838 | 0 | 0 | 0 | 9,342 | 43 | 504,624 | 57,326 | 0 | 13,186 | 284,707 | 3,117 | 9,326 | 2,233 | 0 | 883,904 | 2.3 |
| 1937 | 406,618 | 0 | 33 | 0 | 31,723 | 145 | 480,250 | 54,435 | 0 | 30,220 | 651,642 | 7,116 | 2,664 | 639 | 0 | 1,258,867 | 3.1 |
| 1938 | 305,827 | 0 | 111 | 0 | 30,143 | 137 | 1,099,657 | 124,382 | 0 | 8,660 | 186,504 | 2,032 | 1,128 | 270 | 0 | 1,453,024 | 4.8 |
| 1939 | 512,754 | 0 | 106 | 0 | 68,919 | 315 | 314,851 | 35,542 | 0 | 3,674 | 79,035 | 859 | 5,420 | 1,305 | 0 | 510,026 | 1.0 |
| 1940 | 152,957 | 0 | 244 | 0 | 19,705 | 90 | 133,474 | 15,039 | 0 | 17,705 | 380,481 | 4,130 | 10,049 | 2,422 | 0 | 583,339 | 3.8 |
| 1941 | 531,904 | 0 | 70 | 0 | 8,342 | 38 | 642,782 | 72,293 | 0 | 32,912 | 706,532 | 7,654 | 2,225 | 537 | 0 | 1,473,385 | 2.8 |
| 1942 | 516,621 | 0 | 30 | 0 | 40,124 | 183 | 1,194,007 | 134,060 | 0 | 7,305 | 156,659 | 1,695 | 4,662 | 1,112 | 0 | 1,539,837 | 3.0 |
| 1943 | 1,205,418 | 0 | 143 | 0 | 74,442 | 340 | 264,830 | 29,686 | 0 | 15,007 | 324,527 | 3,562 | 5,405 | 1,321 | 0 | 719,263 | 0.6 |
| 1944 | 351,212 | 0 | 266 | 0 | 16,492 | 75 | 547,139 | 62,179 | 0 | 18,110 | 385,087 | 4,101 | 2,886 | 711 | 0 | 1,037,046 | 3.0 |
| 1945 | 151,326 | 0 | 59 | 0 | 34,405 | 157 | 652,782 | 72,138 | 0 | 9,784 | 207,054 | 2,186 | 1,246 | 315 | 0 | 980,126 | 6.5 |
| 1946 | 739,884 | 0 | 121 | 0 | 40,246 | 183 | 351,541 | 38,531 | 0 | 4,401 | 91,579 | 937 | 1,531 | 371 | 0 | 529,441 | 0.7 |
| 1947 | 1,393,990 | 0 | 147 | 0 | 21,549 | 98 | 156,343 | 16,644 | 0 | 5,048 | 108,068 | 1,165 | 1,316 | 333 | 0 | 310,711 | 0.2 |
| 1948 | 313,319 | 0 | 80 | 0 | 9,390 | 42 | 182,792 | 20,430 | 0 | 4,658 | 96,858 | 989 | 826 | 0 | 0 | 316,065 | 1.0 |
| 1949 | 574,715 | 0 | 36 | 0 | 11,360 | 52 | 165,402 | 17,581 | 0 | 1,766 | 103,345 | 0 | 496 | 650 | 0 | 300,688 | 0.5 |
| 1950 | 861,070 | 0 | 41 | 0 | 9,924 | 45 | 199,966 | 31,411 | 0 | 2,206 | 245,826 | 407 | 2,903 | 1,820 | 0 | 494,549 | 0.6 |
| 1951 | 490,899 | 0 | 38 | 0 | 33,082 | 0 | 618,729 | 13,748 | 0 | 7,046 | 242,042 | 0 | 1,028 | 0 | 0 | 915,713 | 1.9 |
| 1952 | 260,540 | 0 | 0 | 0 | 22,213 | 0 | 258,747 | 30,836 | 0 | 986 | 229,563 | 0 | 3,932 | 8,403 | 0 | 554,680 | 2.1 |
| 1953 | 221,408 | 0 | 0 | 0 | 9,167 | 428 | 125,399 | 32,350 | 0 | 470 | 396,916 | 1,935 | 934 | 5,424 | 0 | 573,023 | 2.6 |
| 1954 | 277,912 | 0 | 547 | 0 | 2,848 | 0 | 39,658 | 75,361 | 0 | 771 | 418,442 | 804 | 1,661 | 5,069 | 0 | 545,161 | 2.0 |
| 1955 | 201,409 | 0 | 369 | 0 | 32,187 | 0 | 303,988 | 32,708 | 0 | 168 | 363,162 | 1,252 | 0 | 0 | 0 | 733,834 | 3.6 |
| 1956 | 483,024 | 0 | 1,330 | 0 | 12,515 | 0 | 106,327 | 36,113 | 0 | 435 | 221,169 | 0 | 1,349 | 4,781 | 0 | 384,019 | 0.8 |
| 1957 | 328,779 | 0 | 0 | 0 | 17,746 | 622 | 232,393 | 109,475 | 0 | 351 | 332,661 | 2,104 | 1,189 | 1,319 | 0 | 697,860 | 2.1 |

-Continued-

Appendix C.2. (page 2 of 2)

| Year | Parent Escapment | Age | | | | | | | | | | | | | | Total | Return Per Spawner |
|------|------------------|-------|-------|--------|---------|--------|---------|---------|-----|-------|-----------|--------|--------|--------|-------|-----------|--------------------|
| | | 0.2 | 1.1 | 0.3 | 1.2 | 2.1 | 1.3 | 2.2 | 3.1 | 1.4 | 2.3 | 3.2 | 2.4 | 3.3 | other | | |
| 1958 | 212,594 | 0 | 1,459 | 0 | 50,630 | 0 | 23,204 | 139,797 | 0 | 0 | 418,960 | 980 | 93 | 432 | 0 | 635,555 | 3.0 |
| 1959 | 308,645 | 0 | 3,286 | 0 | 18,094 | 907 | 109,165 | 81,640 | 227 | 117 | 197,975 | 738 | 689 | 187 | 0 | 413,023 | 1.3 |
| 1960 | 357,230 | 0 | 146 | 0 | 24,446 | 491 | 122,278 | 8,273 | 0 | 1,314 | 210,884 | 141 | 1,618 | 12,824 | 0 | 382,415 | 1.1 |
| 1961 | 254,970 | 0 | 718 | 0 | 1,899 | 799 | 109,935 | 18,702 | 0 | 220 | 401,733 | 2,698 | 5,335 | 2,420 | 0 | 544,458 | 2.1 |
| 1962 | 324,860 | 0 | 123 | 0 | 4,312 | 0 | 44,074 | 69,811 | 0 | 998 | 692,188 | 1,074 | 1,109 | 0 | 0 | 813,689 | 2.5 |
| 1963 | 200,314 | 0 | 0 | 0 | 5,536 | 1,300 | 103,116 | 68,605 | 0 | 29 | 243,939 | 0 | 1,501 | 867 | 0 | 424,894 | 2.1 |
| 1964 | 166,625 | 0 | 88 | 0 | 6,607 | 4,550 | 24,880 | 65,639 | 0 | 700 | 138,282 | 943 | 205 | 6,114 | 0 | 248,007 | 1.5 |
| 1965 | 163,151 | 0 | 1,636 | 0 | 25,157 | 5,547 | 159,113 | 57,942 | 0 | 382 | 650,181 | 1,028 | 659 | 96,111 | 0 | 1,006,110 | 6.2 |
| 1966 | 183,525 | 0 | 1,715 | 0 | 14,517 | 925 | 300,759 | 30,263 | 0 | 461 | 413,807 | 2,453 | 0 | 18,073 | 0 | 818,944 | 4.5 |
| 1967 | 189,000 | 0 | 501 | 0 | 6,187 | 768 | 78,308 | 31,097 | 0 | 701 | 482,538 | 2,780 | 1,342 | 0 | 0 | 613,732 | 3.2 |
| 1968 | 244,836 | 0 | 914 | 0 | 3,835 | 0 | 115,840 | 20,435 | 339 | 636 | 583,517 | 15,603 | 2,691 | 30,092 | 0 | 804,287 | 3.3 |
| 1969 | 132,055 | 0 | 0 | 0 | 1,239 | 1,062 | 85,064 | 270,966 | 283 | 818 | 487,805 | 7,288 | 0 | 16,722 | 0 | 889,104 | 6.7 |
| 1970 | 119,952 | 0 | 0 | 0 | 18,234 | 12,035 | 27,646 | 151,089 | 0 | 1,318 | 461,271 | 12,205 | 0 | 19,870 | 0 | 705,186 | 5.9 |
| 1971 | 232,501 | 0 | 1,500 | 0 | 15,448 | 12,620 | 185,532 | 410,628 | 0 | 236 | 1,898,372 | 4,096 | 2,842 | 13,887 | 0 | 2,545,236 | 10.9 |
| 1972 | 231,270 | 0 | 0 | 0 | 30,087 | 2,445 | 120,639 | 96,178 | 0 | 98 | 718,493 | 30,779 | 267 | 3,698 | 0 | 1,002,684 | 4.3 |
| 1973 | 247,144 | 0 | 0 | 0 | 5,778 | 10,740 | 56,736 | 173,028 | 0 | 0 | 919,784 | 3,852 | 1,248 | 4,756 | 0 | 1,175,921 | 4.8 |
| 1974 | 364,612 | 0 | 4,420 | 0 | 19,284 | 2,764 | 105,493 | 196,981 | 0 | 51 | 677,611 | 2,036 | 2,316 | 9,262 | 2,703 | 1,022,922 | 2.8 |
| 1975 | 314,084 | 0 | 0 | 0 | 24,550 | 7,125 | 123,634 | 185,390 | 0 | 914 | 859,629 | 3,573 | 6,449 | 2,334 | 7,609 | 1,221,206 | 3.9 |
| 1976 | 341,828 | 0 | 1,103 | 0 | 59,255 | 807 | 775,826 | 94,346 | 0 | 2,484 | 499,554 | 0 | 3,117 | 10 | 5,083 | 1,441,585 | 4.2 |
| 1977 | 463,561 | 0 | 252 | 0 | 52,795 | 3,975 | 155,472 | 59,987 | 0 | 1,958 | 1,207,619 | 0 | 2,034 | 789 | 7,477 | 1,492,357 | 3.2 |
| 1978 | 263,009 | 0 | 422 | 0 | 16,755 | 5,822 | 259,993 | 318,606 | 0 | 686 | 278,532 | 490 | 1,752 | 176 | 239 | 883,474 | 3.4 |
| 1979 | 317,889 | 0 | 2,029 | 0 | 102,991 | 5,057 | 281,909 | 28,124 | 0 | 1,235 | 278,237 | 388 | 1,469 | 784 | 3,223 | 705,446 | 2.2 |
| 1980 | 279,729 | 0 | 1,794 | 8,287 | 13,217 | 6,060 | 156,838 | 320,949 | 0 | 632 | 448,135 | 3,096 | 830 | 1,070 | 1,189 | 962,098 | 3.4 |
| 1981 | 301,092 | 0 | 1,116 | 0 | 88,980 | 5,093 | 232,004 | 74,324 | 0 | 664 | 370,421 | 151 | 649 | 74 | 35 | 773,511 | 2.6 |
| 1982 | 305,193 | 0 | 2,542 | 0 | 51,480 | 3,199 | 194,469 | 108,490 | 0 | 740 | 582,904 | 160 | 1,383 | 0 | 301 | 945,668 | 3.1 |
| 1983 | 441,561 | 0 | 0 | 2,715 | 12,125 | 3,824 | 148,143 | 109,807 | 0 | 208 | 1,105,502 | 807 | 11,621 | 76 | 0 | 1,394,829 | 3.2 |
| 1984 | 268,496 | 120 | 914 | 552 | 30,409 | 10,724 | 150,188 | 324,007 | 0 | 2,480 | 1,638,859 | 1,743 | 9,695 | 7,155 | 597 | 2,177,443 | 8.1 |
| 1985 | 369,262 | 98 | 689 | 207 | 18,638 | 16,398 | 174,283 | 161,966 | 0 | 6,682 | 501,843 | 1,161 | 4,112 | 3,789 | 173 | 890,039 | 1.0 |
| 1986 | 207,231 | 103 | 2,745 | 13,060 | 179,104 | 321 | 345,786 | 175,958 | 0 | 1,834 | 497,777 | 7,787 | 12,896 | 2,149 | 619 | 1,240,139 | 6.0 |
| 1987 | 214,452 | 6,253 | 686 | 1,066 | 72,172 | 9,757 | 457,744 | 225,494 | 0 | 6,045 | 1,037,042 | 6,866 | | | 125 | | |
| 1988 | 255,180 | 0 | 2,430 | 1,115 | 57,578 | 3,326 | 295,438 | 109,596 | 0 | | | | | | | | |
| 1989 | 557,171 | 418 | 7,979 | 9,244 | 171,035 | 4,773 | | | | | | | | | | | |
| 1990 | 335,867 | 447 | 442 | | | | | | | | | | | | | | |
| 1991 | 382,587 | | | | | | | | | | | | | | | | |
| 1992 | 405,922 | | | | | | | | | | | | | | | | |
| 1993 | 333,114 | | | | | | | | | | | | | | | | |

Appendix D. Emergency orders for the Chignik Management Area, 1993.

EMERGENCY ORDER NO. 4-F-L-01-93

Issued at: Kodiak, AK

April 13, 1993

EFFECTIVE DATE: 12:00 Noon
Thursday, April 15, 1993

Expiration Date: June 30, 1993 or
or until superseded by a subsequent
emergency order

EXPLANATION:

This emergency order establishes Chignik Management Area commercial herring fishing periods during the sac-roë season (April 15 through June 30) which will begin at 12:00 noon on every odd numbered day and end at 12:00 noon on the following even numbered day. The first period will begin at 12:00 noon April 15 and end at 12:00 noon April 16 and henceforth on all odd numbered days of the month separated by 24 hour closures until 12:00 noon June 30. During the food and bait season (August 15 through February 28) the fishery will be open 24 hours per day, 7 days per week. This emergency order also closes the Big River section to herring fishing until further notice.

REGULATION:

5 AAC 27.560 is amended to read:

5 AAC 27.560. FISHING SEASONS AND WEEKLY FISHING PERIODS.

(b) During the open season from 12:00 noon April 15 through June 30 herring may be taken during 24 hour fishing periods beginning at 12:00 noon on every odd numbered day and ending at 12:00 noon the following even numbered day. Herring may not be taken in any district or section during the following periods:

- (1) From 12:00 noon April 16 through 12:00 noon April 17.
- (2) From 12:00 noon April 18 through 12:00 noon April 19.
- (3) From 12:00 noon April 20 through 12:00 noon April 21.
- (4) From 12:00 noon April 22 through 12:00 noon April 23.
- (5) From 12:00 noon April 24 through 12:00 noon April 25.
- (6) From 12:00 noon April 26 through 12:00 noon April 27.
- (7) From 12:00 noon April 28 through 12:00 noon April 29.
- (8) From 12:00 noon April 30 through 12:00 noon May 1.
- (9) From 12:00 noon May 2 through 12:00 noon May 3.

-Continued-

- (10) From 12:00 noon May 4 through 12:00 noon May 5.
- (11) From 12:00 noon May 6 through 12:00 noon May 7.
- (12) From 12:00 noon May 8 through 12:00 noon May 9.
- (13) From 12:00 noon May 10 through 12:00 noon May 11.
- (14) From 12:00 noon May 12 through 12:00 noon May 13.
- (15) From 12:00 noon May 14 through 12:00 noon May 15.
- (16) From 12:00 noon May 16 through 12:00 noon May 17.
- (17) From 12:00 noon May 18 through 12:00 noon May 19.
- (18) From 12:00 noon May 20 through 12:00 noon May 21.
- (19) From 12:00 noon May 22 through 12:00 noon May 23.
- (20) From 12:00 noon May 24 through 12:00 noon May 25.
- (21) From 12:00 noon May 26 through 12:00 noon May 27.
- (22) From 12:00 noon May 28 through 12:00 noon May 29.
- (23) From 12:00 noon May 30 through 12:00 noon May 31.
- (24) From 12:00 noon June 2 through 12:00 noon June 3.
- (25) From 12:00 noon June 4 through 12:00 noon June 5.
- (26) From 12:00 noon June 6 through 12:00 noon June 7.
- (27) From 12:00 noon June 8 through 12:00 noon June 9.
- (28) From 12:00 noon June 10 through 12:00 noon June 11.
- (29) From 12:00 noon June 12 through 12:00 noon June 13.
- (30) From 12:00 noon June 14 through 12:00 noon June 15.
- (31) From 12:00 noon June 16 through 12:00 noon June 17.
- (32) From 12:00 noon June 18 through 12:00 noon June 19.
- (33) From 12:00 noon June 20 through 12:00 noon June 21.
- (34) From 12:00 noon June 22 through 12:00 noon June 23.
- (35) From 12:00 noon June 24 through 12:00 noon June 25.
- (36) From 12:00 noon June 26 through 12:00 noon June 27.
- (37) From 12:00 noon June 28 through 12:00 noon June 29.

5 AAC 27.580 is amended to read:

5 AAC 27.580. WATERS CLOSED TO HERRING FISHING.

(a) During the period June 12 through October 31, herring may not be taken in waters described in 5 AAC 15.350 and 5 AAC 39.290.

(b) The Big River section of the Eastern District is closed to commercial herring fishing until further notice.

The Big River section is described as follows: all waters of Amber and Aniakchak bays bounded by 157°11'33" W. long., and the latitude of the southernmost marker 500 yards from the mouth of Aniakchak Lagoon.

-Continued-

JUSTIFICATION:

Regulations adopted by the Alaska Board of Fisheries established that weekly fishing periods for herring in the Chignik Area would be announced by emergency order. During the roe season (April 15 through June 30) herring stocks are concentrated and are vulnerable to over exploitation. The 24 hour on and 24 hour off fishery will reduce the time that stocks are subject to exploitation and will allow the Department more time to collect catch information and assess the situation(s). During the food and bait season (August 15 through February 28) effort is anticipated to be low and stocks dispersed, therefore a 7 day per week fishery is justified.

The Big River section has not received any appreciable recruitment of herring into that fishery since 1980 when it was first harvested. The trend in this stock's age composition has regressed from a healthy 1980 biomass dominated by 4 and 5 year olds to a diminished biomass in 1986 dominated by 8 and 9 year old fish. Consequently, the Big River section (272-20 Amber Bay and 272-60 Aniakchak Bay) will remain closed in 1993 until a biomass of multi-age herring is present in sufficient quantity and of healthy age composition to warrant exploitation.

=====

EMERGENCY ORDER NO. 4-F-L-02-93

Issued at: Chignik, AK
June 10, 1993

EFFECTIVE DATE: 8:00 A.M.
Friday, June 11, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: 8:00 A.M.
Saturday, June 12, or until
superseded by subsequent
emergency order.

EXPLANATION:

The Chignik Bay, Central, and Eastern Districts of the Chignik Management Area, will open to commercial salmon fishing from 8:00 A.M. Friday, June 11 until 8:00 A.M. Saturday, June 12. Fishing will be allowed up to the regulatory markers at Hume's Point to the Island Marker in Chignik Lagoon. Fishing in Chignik Lagoon will be started by a flare launched by ADF&G personnel at approximately 8:00 A.M. Friday, June 11. Any sets started prior to the launching of the flare will be required to be stern hauled and a citation will be issued. Fishermen are encouraged to monitor VHF channel 6 for timed counts prior to the Chignik Lagoon opening.

-Continued-

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken from 8:00 A.M. Friday, June 11 until 8:00 A.M. Saturday, June 12.

(b) In the Central and Eastern Districts, salmon may be taken from 8:00 A.M. Friday, June 11 until 8:00 A.M. Saturday, June 12.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay, Central, and Eastern Districts will be open to commercial salmon fishing from 8:00 A.M. Friday, June 11 until 8:00 A.M. Saturday, June 12.

5 AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:

(1) Chignik Lagoon

(A) southwest of a line from the tip of Hume Point to the north side of Chignik Island (56 17'25" N.lat., 158 35'30" W.long.);

(B) Mallard Duck Bay: southwest of a line from the tip of Green Point to Chignik Island (56 16'38" N.lat., 158 34'54" W.long.);

(c) The Western District includes all waters south and west of Jack Point at 56 17'32" N. lat., 158 11'56" W. long., excluding the waters of Chignik Lagoon, to Coal Cape at 55 53'28" N. lat., 159 00'20" W. long..

(d) The Perryville District includes all waters between Coal Cape at 55 23'28" N. lat., 159 00'20" W. long., and Kupreanof Point at 55 33'55" N. lat., 159 35'50" W. long..

JUSTIFICATION:

The cumulative salmon escapement through the Chignik River weir as of June 10 is 60,636 sockeye salmon. The escapement schedule calls for between 50-65,000 sockeye salmon by June 14. Since the escapement objectives have been achieved and an estimated 50-60,000 fish have been determined to be in the Lagoon from a test fishery, a commercial fishery is justified to harvest fish surplus to escapement requirements.

-Continued-

EMERGENCY ORDER NO. 4-F-L-03-93

Issued at: Chignik, AK
June 11, 1993

EFFECTIVE DATE: 6:30 P.M.
Friday, June 11, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: until further
notice, or until superseded
by subsequent emergency order.

EXPLANATION:

The commercial salmon fishing period for Chignik Bay, Central, and Eastern Districts of the Chignik Management Area, will be extended until further notice. Markers in Chignik Lagoon will remain at Hume's Point to Island Marker.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken from 8:00 A.M. Friday, June 11, until further notice.

(b) In the Central and Eastern Districts, salmon may be taken from 8:00 A.M. Friday, June 11, until further notice.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay, Central, and Eastern Districts will be open to commercial salmon fishing from 8:00 A.M. Friday, June 11, until further notice.

5 AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:

(1) Chignik Lagoon

(A) southwest of a line from the tip of Hume Point to the north side of Chignik Island (56 17'25" N.lat., 158 35'30" W.long.);

-Continued-

(B) Mallard Duck Bay: southwest of a line from the tip of Green Point to Chignik Island (56 16'38" N.lat., 158 34'54" W.long.);

(c) The Western District includes all waters south and west of Jack Point at 56 17'32" N.lat., 158 11'56" W.long., excluding the waters of Chignik Lagoon, to Coal Cape at 55 53' 28" N.lat., 159 00'20" W.long..

(d) The Perryville District includes all waters between Coal Cape at 55 23'28" N.lat., 159 00'20" W.long., and Kupreanof Point at 55 33'55" N. lat., 159 35'50" W.long..

JUSTIFICATION:

The fishing extension is based on an escapement of 72,219 sockeye salmon through the weir as of 6:00 P.M., June 11, 1993, with a substantial build-up of fish behind the weir and in the Lagoon. There has been no commercial harvest due to a strike by the Chignik Seiner's Association.

=====

EMERGENCY ORDER NO. 4-F-L-04-93

Issued at: Chignik, AK
June 19, 1993

EFFECTIVE DATE: 4:00 P.M.
Saturday, June 19, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: until further
notice, or until superseded
by subsequent emergency order.

EXPLANATION:

The commercial salmon fishing period for Chignik Bay, Central, and Eastern Districts of the Chignik Management Area will remain open until further notice. Fishing will be allowed up to the regulatory markers at Mensis Point until 12:01 A.M., Sunday, June 20.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken from 8:00 A.M. Friday, June 11, until further notice.

-Continued-

(b) In the Central and Eastern Districts, salmon may be taken from 8:00 A.M. Friday, June 11, until further notice.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay, Central, and Eastern Districts will be open to commercial salmon fishing from 8:00 A.M. Friday, June 11, until further notice.

5 AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:

(c) The Western District includes all waters south and west of Jack Point at 56 17'32" N.lat., 158 11'56" W.long., excluding the waters of Chignik Lagoon, to Coal Cape at 55 53'28" N.lat., 159 00'20" W.long..

(d) The Perryville District includes all waters between Coal Cape at 55 23'28" N.lat., 159 00'20" W.long., and Kupreanof Point at 55 33'55" N. lat., 159 35'50" W.long..

JUSTIFICATION:

The fishing extension is based on an escapement of 72,219 sockeye salmon through the weir as of 6:00 P.M., June 11, 1993, with a substantial build-up of fish behind the weir and in the Lagoon. There has been no commercial harvest due to a strike by the Chignik Seiner's Association.

=====

EMERGENCY ORDER NO. 4-F-L-05-93

Issued at: Chignik, AK
June 27, 1993

EFFECTIVE DATE: 12:00 Noon
Monday, June 28, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: until further
notice, or until superseded
by subsequent emergency order.

EXPLANATION:

Commercial salmon fishing in Chignik Bay, Central, and Eastern Districts of the Chignik Management Area will close at 12:00 Noon, Monday, June 28, until further notice.

-Continued-

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may not be taken from 12:00 Noon, Monday, June 28, until further notice.

(b) In the Central and Eastern Districts, salmon may not be taken from 12:00 Noon, Monday, June 28, until further notice.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay, Central, and Eastern Districts will be closed to commercial salmon fishing from 12:00 Noon Monday, June 28, until further notice.

5 AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:

(c) The Western District includes all waters south and west of Jack Point at 56 17'32" N.lat., 158 11'56" W.long., excluding the waters of Chignik Lagoon, to Coal Cape at 55 53'28" N.lat., 159 00'20" W.long..

(d) The Perryville District includes all waters between Coal Cape at 55 23'28" N.lat., 159 00'20" W.long., and Kupreanof Point at 55 33'55" N. lat., 159 35'50" W.long..

JUSTIFICATION:

The fishing closure is necessary to meet the top end of the escapement schedule of 400,000 sockeye salmon by June 30. The escapement as of 27 June is 359,313 sockeye salmon.

-Continued-

EMERGENCY ORDER NO. 4-F-L-06-93

Issued at: Chignik, AK
June 29, 1993

EFFECTIVE DATE: 12:00 Noon
Saturday, June 19, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: 12:00 Noon
Friday, July 2, or until
superseded by subsequent
emergency order.

EXPLANATION:

The Chignik Bay and Central Districts of the Chignik Management Area will open to commercial salmon fishing for 48 hours from 12:00 Noon, Wednesday, June 30, until 12:00 Noon, Friday, July 2. Fishing will be allowed up to the regulatory markers at Hume's Point to the Island Marker in Chignik Lagoon. Fishing in Chignik Lagoon will be started by a flare launched by ADF&G personnel at approximately 12:00 Noon, Wednesday, June 30. Any sets prior to the launching of the flare will be required to be stern hauled and a citation will be issued. Fishermen are encouraged to monitor VHF channel 6 for timed counts prior to the Chignik Lagoon opening.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken from 12:00 Noon, Wednesday, June 30, until 12:00 Noon, Friday, July 2.

(b) In the Central District, salmon may be taken from 12:00 Noon, Wednesday, June 30, until 12:00 Noon, Friday, July 2.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay and Central Districts will be open to commercial salmon fishing from 12:00 Noon, Wednesday, June 30, until 12:00 Noon, Friday, July 2.

-Continued-

5 AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:

(a) The Eastern District includes all waters from the southernmost marker 500 yards from the mouth of Aniakchak Lagoon to the eastern boundary of the Chignik area.

(c) The Western District includes all waters south and west of Jack Point at 56 17'32" N.lat., 158 11'56" W.long., excluding the waters of Chignik Lagoon, to Coal Cape at 55 53'28" N.lat., 159 00'20" W.long..

(d) The Perryville District includes all waters between Coal Cape at 55 23'28" N.lat., 159 00'20" W.long., and Kupreanof Point at 55 33'55" N. lat., 159 35'50" W.long..

JUSTIFICATION:

Since the minimum escapement goal of 350,000 sockeye salmon by June 30, has been achieved at 363,034 sockeye salmon as of June 28, and the average deliveries for the Lagoon and outside areas have averaged 500 and 900 fish per delivery, respectively, a commercial fishery is justified to harvest the surplus fish. The department may close the Eastern District for the period between the first (Black Lake) and second (Chignik Lake) sockeye salmon runs. Scale pattern analysis is being conducted at this time to help determine the transition period.

=====

EMERGENCY ORDER NO. 4-F-L-07-93

Issued at: Chignik, AK
July 1, 1993

EFFECTIVE DATE: 6:30 P.M.
Thursday, July 1, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: 12:00 Noon
Saturday, July 3, or until
superseded by subsequent
emergency order.

EXPLANATION:

The Chignik Bay and Central Districts of the Chignik Management Area will be extended to commercial salmon fishing for 24 hours from 12:00 Noon, Friday, July 2, until 12:00 Noon, Saturday, July 3. Fishing will be allowed up to the regulatory markers at Hume's Point to the Island Marker in Chignik Lagoon.

-Continued-

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken from 12:00 Noon, Friday, July 2, until 12:00 Noon, Saturday, July 3.

(b) In the Central District, salmon may be taken from 12:00 Noon, Friday, July 2, until 12:00 Noon, Saturday, July 3.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay and Central Districts will be extended to commercial salmon fishing from 12:00 Noon, Friday, July 2, until 12:00 Noon, Saturday, July 3.

5 AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters: (a) The Eastern District includes all waters from the southernmost marker 500 yards from the mouth of Aniakchak Lagoon to the eastern boundary of the Chignik area.

(c) The Western District includes all waters south and west of Jack Point at 56 17'32" N.lat., 158 11'56" W.long., excluding the waters of Chignik Lagoon, to Coal Cape at 55 53'28" N.lat., 159 00'20" W.long..

(d) The Perryville District includes all waters between Coal Cape at 55 23'28" N.lat., 159 00'20" W.long., and Kupreanof Point at 55 33'55" N. lat., 159 35'50" W.long..

JUSTIFICATION:

A one half day's fishing on June 30, yielded 41,538 sockeye salmon and the escapement for the same day was 18,877 sockeye salmon for an accumulated escapement of 388,986 fish. The total escapement is within the scheduled escapement goals of 350,000 to 400,000 sockeye salmon and the catch is strong, therefore meriting an extension of the commercial fishery. The department may close the Eastern District for the period between the first (Black Lake) and second (Chignik Lake) sockeye salmon runs. Scale pattern analysis is being conducted at this time to help determine the transition period.

-Continued-

EMERGENCY ORDER NO. 4-F-L-08-93

Issued at: Chignik, AK
July 2, 1993

EFFECTIVE DATE: 6:30 P.M.
Friday, July 2, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: 12:00 Noon
Sunday, July 4, or until
superseded by subsequent
emergency order.

EXPLANATION:

The Chignik Bay and Central Districts of the Chignik Management Area will be extended to commercial salmon fishing for 24 hours from 12:00 Noon, Saturday, July 3, until 12:00 Noon, Sunday, July 4. Fishing will be allowed up to the regulatory markers at Hume's Point to the Island Marker in Chignik Lagoon.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken from 12:00 Noon, Saturday, July 3, until 12:00 Noon, Sunday, July 4.

(b) In the Central District, salmon may be taken from 12:00 Noon, Saturday, July 3, until 12:00 Noon, Sunday, July 4.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay and Central Districts will be extended to commercial salmon fishing from 12:00 Noon, Saturday, July 3, until 12:00 Noon, Sunday, July 4.

5 AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters: (a) The Eastern District includes all waters from the southernmost marker 500 yards from the mouth of Aniakchak Lagoon to the eastern boundary of the Chignik area.

-Continued-

(c) The Western District includes all waters south and west of Jack Point at 56 17'32" N.lat., 158 11'56" W.long., excluding the waters of Chignik Lagoon, to Coal Cape at 55 53'28" N.lat., 159 00'20" W.long..

(d) The Perryville District includes all waters between Coal Cape at 55 23'28" N.lat., 159 00'20" W.long., and Kupreanof Point at 55 33'55" N. lat., 159 35'50" W.long..

JUSTIFICATION:

Catches are averaging approximately 45,000 sockeye salmon per day and the accumulated escapement stands at 394,297 fish. The total escapement is within the scheduled escapement goals of 350,000 to 400,000 sockeye salmon and the catch is strong, therefore meriting an extension of the commercial fishery. The department may close the Eastern District for the period between the first (Black Lake) and second (Chignik Lake) sockeye salmon runs. Scale pattern analysis is being conducted at this time to help determine the transition period.

=====

EMERGENCY ORDER NO. 4-F-L-09-93

Issued at: Chignik, AK
July 6, 1993

EFFECTIVE DATE: 5:00 P.M.
Wednesday, July 7, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: 5:00 P.M.
Saturday, July 10, or until
superseded by subsequent
emergency order.

EXPLANATION:

The Chignik Bay, Central, Eastern, Western, and Perryville Districts of the Chignik Management Area, will open to commercial salmon fishing at 5:00 P.M. Wednesday, July 7, until 5:00 P.M. Saturday, July 10. Closed waters will include all of the Mitrofanina Section in the Western District. Fishing will be allowed up to the regulatory markers at Mensis Point in Chignik Lagoon. Fishing in Chignik Lagoon will be started by a flare launched by ADF&G personnel at approximately 5:00 P.M. Wednesday, July 7. Any sets started prior to the launching of the flare will be required to be stern hauled and a citation will be issued. Fishermen are encouraged to monitor VHF channel 6 for timed counts prior to the Chignik Lagoon opening.

-Continued-

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken from 5:00 P.M. Wednesday, July 7, until 5:00 P.M. Saturday, July 10.

(b) In the Central, Eastern, Western, and Perryville Districts, salmon may be taken from 5:00 P.M. Wednesday, July 7, until 5:00 P.M. Saturday, July 10.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay, Central, Eastern, Western, and Perryville Districts will be open to commercial salmon fishing from 5:00 P.M. Wednesday, July 7, until 5:00 P.M. Saturday, July 10.

5 AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:
(c)(3) The Mitrofanina Section: all waters including Mitrofanina Island between a point on the west side of Dorner (Kuiukta) Bay's entrance at 55 57' N.lat., 158 40' W.long., and Stirini Point at 55 54'50" n.lat., 158 55'long..

JUSTIFICATION:

The 50% transition date between the first (Black Lake) and second (Chignik Lake) runs was established at between July 3 and July 4, putting the first run escapement at approximately 370,000 sockeye salmon and the second run escapement at approximately 64,000 sockeye salmon. Having met both first and second run escapement schedules, a commercial fishery is necessary to harvest the salmon excess to the escapement.

-Continued-

EMERGENCY ORDER NO. 4-F-L-10-93

Issued at: Chignik, AK
July 9, 1993

EFFECTIVE DATE: 5:00 P.M.
Saturday, July 10, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: 5:00 P.M.
Tuesday, July 13, or until
superseded by subsequent
emergency order.

EXPLANATION:

The Chignik Bay, Central, Eastern, Western, and Perryville Districts of the Chignik Management Area, will be extended to commercial salmon fishing from 5:00 P.M. Saturday, July 10, until 5:00 P.M. Tuesday, July 13. Closed waters will include all of the Mitrofanina Section in the Western District. Fishing will be allowed up to the regulatory markers at Mensis Point in Chignik Lagoon.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken from 5:00 P.M. Saturday, July 10, until 5:00 P.M. Tuesday, July 13.

(b) In the Central, Eastern, Western, and Perryville Districts, salmon may be taken from 5:00 P.M. Saturday, July 10, until 5:00 P.M. Tuesday, July 10.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay, Central, Eastern, Western, and Perryville Districts will be extended to commercial salmon fishing from 5:00 P.M. Saturday, July 10, until 5:00 P.M. Tuesday, July 13.

5 AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:
(c)(3) The Mitrofanina Section: all waters including Mitrofanina Island between a point on the west side of Dorner (Kuiukta) Bay's entrance at 55 57' N.lat., 158 40' W.long., and Stirini Point at 55 54'50" n.lat., 158 55'long..

-Continued-

JUSTIFICATION:

The 50% transition date between the first (Black Lake) and second (Chignik Lake) runs was established at between July 3 and July 4, putting the first run escapement at approximately 388,000 sockeye salmon and the second run escapement at approximately 100,000 sockeye salmon. Having met both first and second run escapement schedules, a commercial fishery is necessary to harvest the salmon excess to the escapement. Overall catches for July 8, averaged 842 salmon per delivery, meriting an extension.

=====

EMERGENCY ORDER NO. 4-F-L-11-93

Issued at: Chignik, AK
July 12, 1993

EFFECTIVE DATE: 5:00 P.M.
Tuesday, July 13, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: Until further
notice, or until superseded by
subsequent emergency order.

EXPLANATION:

The fishing period for the Chignik Bay and Central Districts of the Chignik Management Area, will be extended to commercial salmon fishing from 5:00 P.M. Tuesday, July 13, until further notice. The fishing period for the Eastern District will be extended to commercial salmon fishing from 5:00 P.M. Tuesday, July 13, until 12:01 A.M. Thursday, July 15. The Western and Perryville Districts will close as scheduled at 5:00 P.M. Tuesday, July 13. Until that time, closed waters will still include all of the Mitrofanina Section in the Western District. Fishing will be allowed up to the regulatory markers at Mensis Point in Chignik Lagoon.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken from 5:00 P.M. Tuesday, July 13, until further notice.

(b) In the Central District, salmon may be taken from 5:00 P.M. Tuesday, July 13, until further notice. In the Eastern District, salmon may be taken from 5:00 P.M. Tuesday, July 13, until 12:01 A.M. Thursday, July 15.

5 AAC 15.320 is amended to read:

-Continued-

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay and Central Districts will be extended to commercial salmon fishing from 5:00 P.M. Tuesday, July 13, until further notice. The Eastern District will be extended to commercial salmon fishing from 5:00 P.M. Tuesday, July 13, until 12:01 A.M. Thursday, July 15.

5 AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:
(c)(3) The Mitrofanina Section: all waters including Mitrofanina Island between a point on the west side of Dorner (Kuiukta) Bay's entrance at 55 57' N.lat., 158 40' W.long., and Stirini Point at 55 54'50" n.lat., 158 55'long..

JUSTIFICATION:

As of July 11, the first run escapement stands at approximately 390,000 sockeye salmon, essentially meeting the escapement goal for the end of June. The second run escapement stands at approximately 105,000 sockeye salmon, meeting the July 19 escapement goal. Overall catches for July 11 averaged 836 salmon per delivery. The perryville, Western, and Eastern Districts are closing down to allow evaluation of the strength of the pink and chum salmon runs.

=====

EMERGENCY ORDER NO. 4-F-L-12-93

Issued at: Chignik, AK
July 14, 1993

EFFECTIVE DATE: 5:00 P.M.
Wednesday, July 13, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: Until further
notice, or until superseded by
subsequent emergency order.

EXPLANATION:

Closed waters for Kujulik Bay in the Central District of the Chignik Management Area will be the waters northwest of a line from Brandel Point on Cape Kumlik at 56 36'33" N.lat., 157 40'25" W.long., to the furthest northeast point on Cape Kumlium at 56 33'36" N.lat., 157 49'06" W.long., starting at 5:00 P.M. Wednesday, July 14, until further notice.

-Continued-

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken from 5:00 P.M. Tuesday, July 13, until further notice.

(b) In the Central District, salmon may be taken from 5:00 P.M. Tuesday, July 13, until further notice. In the Eastern District, salmon may be taken from 5:00 P.M. Tuesday, July 13, until 12:01 A.M. Thursday, July 15.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay and Central Districts will be extended to commercial salmon fishing from 5:00 P.M. Tuesday, July 13, until further notice. The Eastern District will be extended to commercial salmon fishing from 5:00 P.M. Tuesday, July 13, until 12:01 A.M. Thursday, July 15.

5 AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:
(c) The Western District includes all waters south and west of Jack Point at 56 17'32" N.lat., 158 11'56" W.long., excluding the waters of Chignik Lagoon, to Coal Cape at 55 53'28" N.lat., 159 00'20" W.long..

(d) The Perryville District includes all waters between Coal Cape at 55 53'28" N.lat., 159 00'20" W.long. and Kupreanof Point at 55 33'55" N.lat., 159 35'50" W.long..

(e)(2) Kujulik Section: all waters northwest of a line from Brandel Point on Cape Kumlik at 56 36'32" N.lat., 157 40'25" W.long., to the furthest northeast point on Cape Kumlium at 56 33'36" N.lat., 157 49'06" W.long..

JUSTIFICATION:

Kujulik Bay is closed to allow evaluation of the strength of the pink and chum salmon runs.

-Continued-

EMERGENCY ORDER NO. 4-F-L-13-93

Issued at: Chignik, AK
July 15, 1993

EFFECTIVE DATE: 12:01 A.M.
Saturday, July 17, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: Until further
notice, or until superseded by
subsequent emergency order.

EXPLANATION:

In the Chignik Bay and Central Districts of the Chignik Management Area, commercial salmon fishing will close at 12:01 A.M. Saturday, July 17.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may not be taken from 12:01 A.M. Saturday, July 17, until further notice.

(b) In the Eastern, Central, Western, Perryville Districts, salmon may not be taken from 12:01 A.M. Saturday, July 17, until further notice.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) Salmon fishing periods in the Chignik Bay, Eastern, Central, Western, and Perryville Districts will be closed to commercial salmon fishing from 12:01 A.M. Saturday, July 17, until further notice.

5 AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters: The Chignik Area includes all waters of Alaska on the south side of the Alaska Peninsula enclosed by 156 20'13" W.long., (the longitude of the southern entrance Imuya Bay near Kilokak Rocks) and a line extending 135 southeast from Kupreanof Point.

JUSTIFICATION:

This closure will allow for an increase in the daily escapement rate for the second run. The second run escapement at this time is approximately 108,000 sockeye salmon.

-Continued-

EMERGENCY ORDER NO. 4-F-L-14-93

Issued at: Chignik, AK
July 19, 1993

EFFECTIVE DATE: 3:00 P.M.
Tuesday, July 20, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: 12:01 A.M.
Saturday, July 24, or until
superseded by subsequent
emergency order.

EXPLANATION:

The Chignik Bay, Central, Eastern, Western, and Perryville Districts of the Chignik Management Area, will open to commercial salmon fishing at 3:00 P.M. Tuesday, July 20, until 12:01 A.M. Saturday, July 24. Closed waters will include all of the Mitrofanina Section in the Western District, and all the waters in the Central District northwest of a line in Kujulik Bay from Brandel Point on Cape Kumlik to the furthest northeast point on Cape Kumlium. Fishing will be allowed up to the regulatory markers at Hume's Point to the Island Marker extending on through the Backside of Chignik Island to Green Point in Chignik Lagoon. Fishing in Chignik Lagoon will be started by a flare launched by ADF&G personnel at approximately 3:00 P.M. Tuesday, July 20. Any sets started prior to the launching of the flare will be required to be stern hauled and a citation will be issued. Fishermen are encouraged to monitor VHF channel 6 for timed counts prior to the Chignik Lagoon opening.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken from 3:00 P.M. Tuesday, July 20, until 12:01 A.M. Saturday, July 24.

(b) In the Central, Eastern, Western, and Perryville Districts, salmon may be taken from 3:00 P.M. Tuesday, July 20, until 12:01 A.M. Saturday, July 24.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay, Central, Eastern, Western, and Perryville Districts will be open to commercial salmon fishing from 3:00 P.M. Tuesday, July 20, until 12:01 A.M. Saturday, July 24.

-Continued-

5AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:
(1) Chignik Lagoon

(A) southwest of a line from the tip of Hume Point to the north side of Chignik Island (56 17'25" N.lat., 158 34'54" W.long.);

(B) Mallard Duck Bay: southwest of a line from the tip of Green Point to Chignik Island (56 16'38" N.lat., 158 34'54" W.long.);

(c)(3) Mitrofanina Section: all waters including Mitrofanina Island between a point on the west side of Dorner (Kuiukta) Bay's entrance at 55 57' N.lat., 158 40' W.long., and Stirini Point at 55 54'50" n.lat., 158 55'long..

(e)(2) Kujulik Section: all waters northwest of a line in Kujulik Bay from Brandel Point on Cape Kumlik at 56 36'32" N.lat., 157 40'25" W.long., to the furthest northeast point on Cape Kumlium at 56 33'36" N.lat., 157 49'06" W.long..

JUSTIFICATION:

There is an estimated 6,000 sockeye salmon through the weir today at this time, putting the second run escapement at approximately 121,000 sockeye salmon. The July 19 scheduled escapement of 115,000 sockeye salmon has been met, therefore meriting a fishery.

=====

EMERGENCY ORDER NO. 4-F-L-15-93

Issued at: Chignik, AK
July 22, 1993

EFFECTIVE DATE: 12:01 A.M.
Saturday, July 24, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: 12:01 A.M.
Tuesday, July 27, or until
superseded by subsequent
emergency order.

EXPLANATION:

The fishing period for the Chignik Bay and Central Districts of the Chignik Management Area, will be extended to commercial salmon fishing for 72 hours from 12:01 A.M. Saturday, July

-Continued-

24, until 12:01 A.M. Tuesday, July 27. The fishing period for the Eastern, Western, and Perryville Districts of the Chignik Management Area, will be extended to commercial salmon fishing for 24 hours from 12:01 A.M. Saturday, July 24, until 12:01 A.M. Sunday, July 25. Closed waters will include all of the Mitrofanina Section in the Western District, and all the waters in the Central District northwest of a line in Kujulik Bay from Brandel Point on Cape Kumlik to the furthest northeast point on Cape Kumlium. Fishing will be allowed up to the regulatory markers at Hume's Point to the Island Marker extending on through the Backside of Chignik Island to Green Point in Chignik Lagoon.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken from 12:01 A.M. Saturday, July 24, until 12:01 A.M. Tuesday, July 27.

(b) In the Central District, salmon may be taken from 12:01 A.M. Saturday, July 24, until 12:01 A.M. Tuesday, July 27. In the Eastern, Western, and Perryville Districts, salmon may be taken from 12:01 A.M. Saturday, July 24, until 12:01 A.M. Sunday, July 25.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay and Central Districts will be open to commercial salmon fishing from 12:01 A.M. Saturday, July 24, until 12:01 A.M. Tuesday, July 27. The Eastern, Western, and Perryville Districts will be open to commercial salmon fishing from 12:01 A.M. Saturday, July 24, until 12:01 A.M. Sunday, July 25.

5AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:

(1) Chignik Lagoon

(A) southwest of a line from the tip of Hume Point to the north side of Chignik Island (56 17'25" N.lat., 158 34'54" W.long.);

(B) Mallard Duck Bay: southwest of a line from the tip of Green Point to Chignik Island (56 16'38" N.lat., 158 34'54" W.long);

-Continued-

(c)(3) Mitrofanina Section: all waters including Mitrofanina Island between a point on the west side of Dorner (Kuiukta) Bay's entrance at 55 57' N.lat., 158 40' W.long., and Stirini Point at 55 54'50" n.lat., 158 55'long..

(e)(2) Kujulik Section: all waters northwest of a line in Kujulik Bay from Brandel Point on Cape Kumlik at 56 36'32" N.lat., 157 40'25" W.long., to the furthest northeast point on Cape Kumlium at 56 33'36" N.lat., 157 49'06" W.long..

JUSTIFICATION:

There is an estimated 3,000 sockeye salmon through the weir today at this time, putting the second run escapement at approximately 170,000 sockeye salmon. The July 26 scheduled minimum escapement of 170,000 sockeye salmon has been met, therefore meriting a fishery.

=====

EMERGENCY ORDER NO. 4-F-L-16-93

Issued at: Chignik, AK
July 27, 1993

EFFECTIVE DATE: 12:01 A.M.
Thursday, July 29, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: 12:01 A.M.
Sunday, August 1, or until
superseded by subsequent
emergency order.

EXPLANATION:

The Eastern, Western, and Perryville Districts of the Chignik Management Area, will be opened to commercial salmon fishing for 72 hours from 12:01 A.M. Thursday, July 29, until 12:01 A.M. Sunday, August 1. Closed waters will include all of the Mitrofanina Section in the Western District.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (b) In the Eastern, Western, and Perryville Districts, salmon may be taken from 12:01 A.M. Thursday, July 29, until 12:01 A.M. Sunday, August 1.

-Continued-

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Eastern, Western, and Perryville Districts will be open to commercial salmon fishing from 12:01 A.M. Thursday, July 29, until 12:01 A.M. Sunday, August 1.

5AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters: (c)(3) The Mitrofanina Section: all waters including Mitrofanina Island between a point on the west side of Dorner (Kuiukta) Bay's entrance at 55 57' N.lat., 158 40' W.long., and Stirini Point at 55 54'50" n.lat., 158 55'long..

JUSTIFICATION:

Aerial surveys in Eastern, Western, and Perryville Districts indicate sufficient numbers of pink and chum salmon in the bays and stream mouths to merit a short fishing period.

=====

EMERGENCY ORDER NO. 4-F-L-17-93

Issued at: Chignik, AK
July 28, 1993

EFFECTIVE DATE: 12:00 Noon
Thursday, July 29, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: 12:01 A.M.
Sunday, August 1, or until
superseded by subsequent
emergency order.

EXPLANATION:

The Mitrofanina Section of the Western District of the Chignik Management Area, will open to commercial salmon fishing at 12:00 Noon Thursday, July 29, until 12:01 A.M. Sunday, August 1.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (b) In the Mirtofania Section of the Western District, salmon may be taken from 12:00 Noon Thursday, July 29, until 12:01 A.M. Sunday, August 24.

-Continued-

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Mitrofanina Section of the Western District will be open to commercial salmon fishing from 12:00 Noon Thursday, July 29, until 12:01 A.M. Sunday, August 24.

5AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:
(11) Ivan Bay: north of a line from the marker on the northwest shore 1,000 yards from the stream mouth to the marker on the southeast shore 750 yards from the stream mouth.

JUSTIFICATION:

A test fish vessel with a Fish and Game biologist on board conducted three test sets around Mitrofanina Island, landing approximately 2,500 salmon. Preliminary results indicated that 2% of the total catch contained immature salmon, therefore meriting a fishery.

=====

EMERGENCY ORDER NO. 4-F-L-18-93

Issued at: Chignik, AK
August 2, 1993

EFFECTIVE DATE: 5:00 P.M.
Monday, August 2, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: 5:00 P.M.
Thursday, August 5, or until
superseded by subsequent
emergency order.

EXPLANATION:

The Chignik Bay and Central Districts of the Chignik Management Area, will open to commercial salmon fishing for 72 hours at 5:00 P.M. Monday, August 2, until 5:00 P.M. Thursday, August 5. Closed waters in the Central District will include all the waters northwest of a line in Kujulik Bay from Brandel Point on Cape Kumlik to the furthest northeast point on Cape Kumlium. Fishing will be allowed up to the regulatory markers at Hume's Point to the Island Marker extending on through the Backside of Chignik Island to Green Point in Chignik Lagoon. Fishing in Chignik Lagoon will be started by a flare launched by ADF&G personnel at approximately 5:00 P.M. Monday, August 2. Any sets started prior to the launching of the flare will be required to be stern hauled and a citation will be issued. Fishermen are encouraged to monitor VHF channel 6 for timed counts prior to the Chignik Lagoon opening.

-Continued-

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken from 5:00 P.M. Monday, August 2, until 5:00 P.M. Thursday, August 5.

(b) In the Central District, salmon may be taken from 5:00 P.M. Monday, August 2, until 5:00 P.M. Thursday, August 5.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay and Central Districts will be open to commercial salmon fishing from 5:00 P.M. Monday, August 2, until 5:00 P.M. Thursday, August 5.

5AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:
(1) Chignik Lagoon

(A) southwest of a line from the tip of Hume Point to the north side of Chignik Island (56 17'25" N.lat., 158 34'54" W.long.);

(B) Mallard Duck Bay: southwest of a line from the tip of Green Point to Chignik Island (56 16'38" N.lat., 158 34'54" W.long.);

(a) The Eastern District includes all waters from the southernmost marker 500 yards from the mouth of Aniakchak Lagoon to the eastern boundary of the Chignik area.

(c) The Western District includes all waters south and west of Jack Point at 56 17'32" N.lat., 158 11'56" W.long., excluding the waters of Chignik Lagoon, to Coal Cape at 55 53'28" N.lat., 159 00'20" W.long..

(d) The Perryville District includes all waters between Coal Cape at 55 53'28" N.lat., 159 00'20" W.long. and Kupreanof Point at 55 33'55" N.lat., 159 35'50" W.long..

(e)(2) Kujulik Section: all waters northwest of a line in Kujulik Bay from Brandel Point on Cape Kumlik at 56 36'32" N.lat., 157 40'25" W.long., to the furthest northeast point on Cape Kumlium at 56 33'36" N.lat., 157 49'06" W.long..

-Continued-

JUSTIFICATION:

There is an estimated 1,000 sockeye salmon through the weir today at this time, putting the second run escapement at approximately 190,000 sockeye salmon. The Outside Districts will be surveyed as weather permits and opened as adequate escapements allows.

=====

EMERGENCY ORDER NO. 4-F-L-19-93

Issued at: Chignik, Ak
August 9, 1993

EFFECTIVE DATE: 7:00 P.M.
Tuesday, August 10, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: 7:00 P.M.
Friday, August 13, or until
superseded by subsequent
emergency order.

EXPLANATION:

The Chignik Bay, Eastern, Western, and Perryville Districts of the Chignik Management Area, will open to commercial salmon fishing for 72 hours at 7:00 P.M. Tuesday, August 10, until 7:00 P.M. Friday, August 13. Closed waters in the Perryville and Western Districts will include all the waters northwest of a line from Alexander Point to Cape Itki. Markers in Ivanof Bay will be the Road Island markers. All waters in the Central District will be closed. Fishing will be allowed up to the regulatory markers at Hume's Point to the Island Marker extending on through the Backside of Chignik Island to Green Point in Chignik Lagoon. Fishing in Chignik Lagoon will be started by a flare launched by ADF&G personnel at approximately 7:00 P.M. Tuesday, August 10. Any sets started prior to the launching of the flare will be required to be stern hauled and a citation will be issued. Fishermen are encouraged to monitor VHF channel 6 for timed counts prior to the Chignik Lagoon opening.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken from 7:00 P.M. Tuesday, August 10, until 7:00 P.M. Friday, August 13.

(b) In the Eastern, Western, and Perryville Districts, salmon may be taken from 7:00 P.M. Tuesday, August 10, until 7:00 P.M. Friday, August 13.

-Continued-

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay, Eastern, Western, and Perryville Districts will be open to commercial salmon fishing from 7:00 P.M. Tuesday, August 10, until 7:00 P.M. Friday, August 13.

5AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:
(1) Chignik Lagoon

(A) southwest of a line from the tip of Hume Point to the north side of Chignik Island (56 17'25" N.lat., 158 34'54" W.long.);

(B) Mallard Duck Bay: southwest of a line from the tip of Green Point to Chignik Island (56 16'38" N.lat., 158 34'54" W.long.);

(c) In the Western District, all waters northwest of a line from Cape Itki to Coal Cape (55 53'28" N.lat., 159 00'20" W.long.).

(d) In the Perryville District, all waters northwest of a line from Coal Cape (55 53'28" N.lat., 159 00'20" W.long.) to Alexander Point (55 47'22" N.lat., 159 18'50" W.long.).

(e) The Central District includes all waters, excluding the waters of the Chignik Bay District between Jack Point (56 17'32" N.lat., 158 11'56" W.long.), and the southernmost marker 500 yards from the mouth of Aniakchak Lagoon.

JUSTIFICATION:

There is an estimated 233,000 second run sockeye salmon through the weir today at this time. Pink and chum salmon numbers in the Western and Perryville Districts are adequate in some of the major systems to allow for a cape fishery only at this time. Escapement numbers are adequate for bay fishing in the Eastern District. More pink and chum salmon are needed for escapement in the Central District.

-Continued-

EMERGENCY ORDER NO. 4-F-L-20-93

Issued at: Chignik, Ak
August 15, 1993

EFFECTIVE DATE: 12:00 Noon
Monday, August 16, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: 12:00 Noon
Thursday, August 19, or until
superseded by subsequent
emergency order.

EXPLANATION:

The Chignik Bay, Eastern, Western, and Perryville Districts of the Chignik Management Area, will open to commercial salmon fishing for 72 hours at 12:00 Noon Monday, August 16, until 12:00 Noon Thursday, August 19. Closed waters in the Perryville and Western Districts will include all the waters northwest of a line from Alexander Point to Cape Itki. Markers in Ivanof Bay will be the Road Island markers. All waters in the Central District will be closed. Fishing will be allowed up to the regulatory markers at Hume's Point to the Island Marker extending on through the Backside of Chignik Island to Green Point in Chignik Lagoon. Fishing in Chignik Lagoon will be started by a flare launched by ADF&G personnel at approximately 12:00 Noon Monday, August 16. Any sets started prior to the launching of the flare will be required to be stern hauled and a citation will be issued. Fishermen are encouraged to monitor VHF channel 6 for timed counts prior to the Chignik Lagoon opening.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken from 12:00 Noon Monday, August 16, until 12:00 Noon Thursday, August 19.

(b) In the Eastern, Western, and Perryville Districts, salmon may be taken from 12:00 Noon Monday, August 16, until 12:00 Noon Thursday, August 19.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay, Eastern, Western, and Perryville Districts will be open to commercial salmon fishing from 12:00 Noon Monday, August 16, until 12:00 Noon Thursday, August 19.

-Continued-

5AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:
(1) Chignik Lagoon

(A) southwest of a line from the tip of Hume Point to the north side of Chignik Island (56 17'25" N.lat., 158 34'54" W.long.);

(B) Mallard Duck Bay: southwest of a line from the tip of Green Point to Chignik Island (56 16'38" N.lat., 158 34'54" W.long.);

(c) In the Western District, all waters northwest of a line from Cape Itki to Coal Cape (55 53'28" N.lat., 159 00'20" W.long.).

(d) In the Perryville District, all waters northwest of a line from Coal Cape (55 53'28" N.lat., 159 00'20" W.long.) to Alexander Point (55 47'22" N.lat., 159 18'50" W.long.).

(e) The Central District includes all waters, excluding the waters of the Chignik Bay District between Jack Point (56 17'32" N.lat., 158 11'56" W.long.), and the southernmost marker 500 yards from the mouth of Aniakchak Lagoon.

JUSTIFICATION:

The weir disassembly was initiated the morning of August 14. The total weir count for the second run to that date was approximately 245,000 sockeye salmon, leaving approximately 5,000 additional sockeye salmon needed by the end of August for the total escapement of 250,000 sockeye salmon. The average daily escapement through the weir for the last seven days was approximately 4,800 sockeye salmon.

-Continued-

EMERGENCY ORDER NO. 4-F-L-21-93

Issued at: Chignik, Ak
August 20, 1993

EFFECTIVE DATE: 12:00 Noon
Monday, August 23, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: until further
notice, or superseded by
subsequent emergency order.

EXPLANATION:

The Chignik Bay District of the Chignik Management Area, will open to commercial salmon fishing on a scheduled 4 day per week fishing period effective at 12:00 Noon Mondays, until 12:00 Noon Fridays, until further notice. Fishing will be allowed up to the regulatory markers at Hume's Point to the Island Marker extending on through the Backside of Chignik Island to Green Point in Chignik Lagoon. The Eastern, Western, and Perryville Districts of the Chignik Management Area, will open to commercial salmon fishing on a scheduled 3 day per week period effective at 12:01 A.M. Tuesdays, until 11:59 P.M. Thursdays, until further notice. Closed waters in the Western District will include all waters northwest of a line from Coal Cape to Cape Itki. Markers in Ivanof Bay in the Perryville District will be the Road Island markers. All waters in the Central District are closed.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken on a scheduled 4 day per week fishing period from 12:00 Noon Mondays, until 12:00 Noon Thursdays, until further notice.

(b) In the Eastern, Western, and Perryville Districts, salmon may be taken on a scheduled 3 day per week fishing period from 12:01 A.M. Tuesdays, until 11:59 P.M. Thursdays, until further notice.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay District will open to commercial salmon fishing on a scheduled 4 day per week fishing period from 12:00 Noon Mondays, until 12:00 Noon Thursdays until further notice. The Eastern, Western, and Perryville Districts will be open to commercial salmon fishing on a scheduled 3 day per week fishing period from 12:01 A.M. Tuesdays, until 11:59 P.M. Thursdays, until further notice.

-Continued-

5AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:

(1) Chignik Lagoon

(A) southwest of a line from the tip of Hume Point to the north side of Chignik Island (56 17'25" N.lat., 158 34'54" W.long.);

(B) Mallard Duck Bay: southwest of a line from the tip of Green Point to Chignik Island (56 16'38" N.lat., 158 34'54" W.long);

(c) In the Western District, all waters northwest of a line from Cape Itki to Coal Cape (55 53'28" N.lat., 159 00'20" W.long.).

(13) In the Perryville District, Ivanof Bay: all waters northwest of a line from a point on the northeast shore at 55 52'28" N.lat., 159 28'18" W.long. to a point on the north end of a spit at 55 51' N.lat., 159 30'54" W.long. (all waters northwest of Road Island are closed).

(e) The Central District includes all waters, excluding the waters of the Chignik Bay District between Jack Point (56 17'32" N.lat., 158 11'56" W.long.), and the southernmost marker 500 yards from the mouth of Aniakchak Lagoon.

JUSTIFICATION:

The weir disassembly was initiated the morning of August 14. The total weir count for the second run to that date was approximately 245,000 sockeye salmon. The average daily escapement through the weir for the last seven days prior to the removal of the weir was approximately 4,800 sockeye salmon.

=====

EMERGENCY ORDER NO. 4-F-L-22-93

Issued at: Chignik, Ak
August 20, 1993

EFFECTIVE DATE: 12:00 Noon
Monday, August 23, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: until further
notice, or superseded by
subsequent emergency order.

EXPLANATION:

The Chignik Bay District of the Chignik Management Area, will open to commercial salmon fishing on a scheduled 4 day per week fishing period effective at 6:00 A.M. Mondays, until 6:00

-Continued-

A.M. Fridays, until further notice. Fishing will be allowed up to the regulatory markers at Hume's Point to the Island Marker extending on through the Backside of Chignik Island to Green Point in Chignik Lagoon. The Eastern, Western, and Perryville Districts of the Chignik Management Area, will open to commercial salmon fishing on a scheduled 3 day per week period effective at 12:01 A.M. Tuesdays, until 11:59 P.M. Thursdays, until further notice. Closed waters in the Western District will include all waters northwest of a line from Coal Cape to Cape Itki. Markers in Ivanof Bay in the Perryville District will be the Road Island markers. All waters in the Central District are closed.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken on a scheduled 4 day per week fishing period from 6:00 A.M. Mondays, until 6:00 A.M. Thursdays, until further notice.

(b) In the Eastern, Western, and Perryville Districts, salmon may be taken on a scheduled 3 day per week fishing period from 12:01 A.M. Tuesdays, until 11:59 P.M. Thursdays, until further notice.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay District will open to commercial salmon fishing on a scheduled 4 day per week fishing period from 6:00 A.M. Mondays, until 6:00 A.M. Thursdays until further notice. The Eastern, Western, and Perryville Districts will be open to commercial salmon fishing on a scheduled 3 day per week fishing period from 12:01 A.M. Tuesdays, until 11:59 P.M. Thursdays, until further notice.

5AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:
(1) Chignik Lagoon

(A) southwest of a line from the tip of Hume Point to the north side of Chignik Island (56 17'25" N.lat., 158 34'54" W.long.);

(B) Mallard Duck Bay: southwest of a line from the tip of Green Point to Chignik Island (56 16'38" N.lat., 158 34'54" W.long);

-Continued-

(c) In the Western District, all waters northwest of a line from Cape Itki to Coal Cape (55 53'28" N.lat., 159 00'20" W.long.).

(13) In the Perryville District, Ivanof Bay: all waters northwest of a line from a point on the northeast shore at 55 52'28" N.lat., 159 28'18" W.long. to a point on the north end of a spit at 55 51' N.lat., 159 30'54" W.long. (all waters northwest of Road Island are closed).

(e) The Central District includes all waters, excluding the waters of the Chignik Bay District between Jack Point (56 17'32" N.lat., 158 11'56" W.long.), and the southernmost marker 500 yards from the mouth of Aniakchak Lagoon.

JUSTIFICATION:

The weir disassembly was initiated the morning of August 14. The total weir count for the second run to that date was approximately 245,000 sockeye salmon. The average daily escapement through the weir for the last seven days prior to the removal of the weir was approximately 4,800 sockeye salmon.

=====

EMERGENCY ORDER NO. 4-F-L-23-93

Issued at: Chignik, Ak
August 27, 1993

EFFECTIVE DATE: 6:00 A.M.
Mondays

Contact: Alan Quimby
Area Management Biologist

Expiration Date: until further
notice, or superseded by
subsequent emergency order.

EXPLANATION:

The Chignik Bay District of the Chignik Management Area, will open to commercial salmon fishing on a scheduled 2 day per week fishing period effective at 6:00 A.M. Mondays, until 6:00 A.M. Wednesdays, until further notice. Fishing will be allowed up to the regulatory markers at Hume's Point to the Island Marker extending on through the Backside of Chignik Island to Green Point in Chignik Lagoon. The Eastern, Central, Western, and Perryville Districts of the Chignik Management Area, will open to commercial salmon fishing on a scheduled 2 day per week period effective at 12:01 A.M. Mondays, until 11:59 P.M. Tuesdays, until further notice. Closed waters in the Western District will include all waters northwest of a line from Coal Cape to a point on the west side of Dorner Bay entrance at 55 57'N.lat., 158 40'W.long.. Markers in Ivanof Bay in the Perryville District will be the Road Island markers. All waters in the

-Continued-

Central District will include all waters northwest of a line in Kujulik Bay from Brandel Point to the furthest northeast point on Cape Kumliun; and all waters northwest of a line from the southernmost cape at Weasel Mountain to the mouth of Through Creek in Chignik Bay.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken on a scheduled 2 day per week fishing period from 6:00 A.M. Mondays, until 6:00 A.M. Wednesdays, until further notice.

(b) In the Eastern, Central, Western, and Perryville Districts, salmon may be taken on a scheduled 2 day per week fishing period from 12:01 A.M. Mondays, until 11:59 P.M. Tuesdays, until further notice.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay District will open to commercial salmon fishing on a scheduled 2 day per week fishing period from 6:00 A.M. Mondays, until 6:00 A.M. Thursdays until further notice. The Eastern, Central, Western, and Perryville Districts will be open to commercial salmon fishing on a scheduled 2 day per week fishing period from 12:01 A.M. Mondays, until 11:59 P.M. Tuesdays, until further notice.

5AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:
(1) Chignik Lagoon

(A) southwest of a line from the tip of Hume Point to the north side of Chignik Island (56 17'25" N.lat., 158 34'54" W.long.);

(B) Mallard Duck Bay: southwest of a line from the tip of Green Point to Chignik Island (56 16'38" N.lat., 158 34'54" W.long.);

(c) In the Western District, all waters northwest of a line from Coal Cape (55 53'28" N.lat., 159 00'20" W.long.) to a point on the west side of Dorner Bay entrance (55 57'N.lat., 158 40'W.long.).

-Continued-

(13) In the Perryville District, Ivanof Bay: all waters northwest of a line from a point on the northeast shore (55 52'28" N.lat., 159 28'18" W.long.) to a point on the north end of a spit at 55 51' N.lat., 159 30'54" W.long. (all waters northwest of Road Island are closed).

(e) The Central District includes all waters northwest of a line in Kujulik Bay from Brandel Point (56 38'40"N.lat., 158 50'24"W.long.) to the furthest northeast point at Cape Kumliun (56 33'36"N.lat., 157 49'06"W.long.); and all waters northwest of a line from the southernmost cape at Weasel Mountain (56 27'40"N.lat, 158 11'05"W.long.) to the mouth of Through Creek (56 24'10"N.lat., 158 27'37"W.long.).

JUSTIFICATION:

The average Chignik Lagoon coho salmon catch per day from August 15 through August is 298 fish. The average Chignik Lagoon coho salmon catch per day for the same time period in 1992 was 1229 fish; in 1991 was 620 fish; in 1990 was 330 fish ;and in 1989 was 97 fish. Until a significant increase of coho salmon catches per vessel are seen, fishing days will be held at a minimum.

=====

| | |
|---------------------------------|---|
| EMERGENCY ORDER NO. 4-F-L-24-93 | Issued at: Chignik, Ak September 1, 1993 |
|---------------------------------|---|

EFFECTIVE DATE: 6:00 A.M.
Thursday, September 2, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: 6:00 A.M.
September 3, 1991, or until
superseded by subsequent
emergency order.

EXPLANATION:

The Chignik Bay District of the Chignik Management Area, will open to commercial salmon fishing for a scheduled 1 day fishing period effective at 6:00 A.M. Thursday, September 2, until 6:00 A.M. Friday, September 3, until further notice. Fishing will be allowed up to the regulatory markers at Hume's Point to the Island Marker extending on through the Backside of Chignik Island to Green Point in Chignik Lagoon. The Eastern, Central, Western, and Perryville Districts of the Chignik Management Area, will remain closed to commercial salmon fishing during this fishing period.

-Continued-

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken on a scheduled 1 day fishing period from 6:00 A.M. Thursday, September 2, until 6:00 A.M. Friday, September 3, until further notice.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay District will open to commercial salmon fishing on a scheduled 1 day fishing period from 6:00 A.M. Thursday, September 2, until 6:00 A.M. Friday, September 3, until further notice.

5AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:
(1) Chignik Lagoon

(A) southwest of a line from the tip of Hume Point to the north side of Chignik Island (56 17'25" N.lat., 158 34'54" W.long.);

(B) Mallard Duck Bay: southwest of a line from the tip of Green Point to Chignik Island (56 16'38" N.lat., 158 34'54" W.long.);

(a) In the Eastern District, all waters from the southernmost marker 500 yards from the mouth of Aniakchak Lagoon to the eastern boundary of the Chignik Area;

(c) In the Western District, all waters south and west of Jack Point (56 17'32" N.lat., 158 11'56" W.long.), excluding the waters of Chignik Lagoon, to Coal Cape (55 53'28" N.lat., 159 00'20" W.long.);

(d) In the Perryville District, all waters between Coal Cape (55 53'28" N.lat., 159 00'20" W.long.) and Kupreanof Point (55 33'55" N.lat., 159 35'50" W.long.);

(e) In the Central District, all waters, excluding the waters of the Chignik Bay District between Jack Point (56 18'17" N.lat., 158 14'54" W.long.), and the southernmost marker 500 yards from the mouth of Aniakchak Lagoon.

-Continued-

JUSTIFICATION:

The Chignik Lagoon coho salmon catch per day has increased in the last two days of fishing (1,370 and 1,135, respectively); therefore meriting another day of fishing.

=====

EMERGENCY ORDER NO. 4-F-L-25-93

Issued at: Chignik, Ak
September 2, 1993

EFFECTIVE DATE: 6:00 A.M. Sunday
September 5, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: until further
notice, or superseded by
subsequent emergency order.

EXPLANATION:

The Chignik Bay District of the Chignik Management Area, will open to commercial salmon fishing on a scheduled 3 day per week fishing period effective at 6:00 A.M. Sunday, September 5, until 6:00 A.M. Wednesday, September 8, until further notice. Fishing will be allowed up to the regulatory markers at Mensis Point in Chignik Lagoon. The Eastern, Central, Western, and Perryville Districts of the Chignik Management Area, will open to commercial salmon fishing on a scheduled 2 day per week period effective at 12:01 A.M. Monday, September 6, until 11:59 P.M. Tuesday, September 7, until further notice. Closed waters in the Western District will include all waters northwest of a line from Coal Cape to a point on the west side of Dorner Bay entrance at 55 57'N.lat., 158 40'W.long.. Markers in Ivanof Bay in the Perryville District will be the Road Island markers. All waters in the Central District will include all waters northwest of a line in Kujulik Bay from Brandel Point to the furthest northeast point on Cape Kumliun; and all waters northwest of a line from the southernmost cape at Weasel Mountain to the mouth of Through Creek in Chignik Bay.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken on a scheduled 3 day per week fishing period from 6:00 A.M. Monday, September 5, until 6:00 A.M. Wednesday, September 8, until further notice.

-Continued-

(b) In the Eastern, Central, Western, and Perryville Districts, salmon may be taken on a scheduled 2 day per week fishing period from 12:01 A.M. Monday, September 6, until 11:59 P.M. Tuesday, September 7, until further notice.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay District will open to commercial salmon fishing on a scheduled 3 day per week fishing period from 6:00 A.M. Monday, September 6, until 6:00 A.M. Wednesday, September 7, until further notice. The Eastern, Central, Western, and Perryville Districts will be open to commercial salmon fishing on a scheduled 2 day per week fishing period from 12:01 A.M. Monday, September 6, until 11:59 P.M. Tuesday, September 7, until further notice.

5AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:
(c) In the Western District, all waters northwest of a line from Coal Cape (55 53'28" N.lat., 159 00'20" W.long.) to a point on the west side of Dorner Bay entrance (55 57'N.lat., 158 40'W.long.).

(13) In the Perryville District, Ivanof Bay: all waters northwest of a line from a point on the northeast shore (55 52'28" N.lat., 159 28'18" W.long.) to a point on the north end of a spit at 55 51' N.lat., 159 30'54" W.long. (all waters northwest of Road Island are closed).

(e) The Central District includes all waters northwest of a line in Kujulik Bay from Brandel Point (56 38'40"N.lat., 158 50'24"W.long.) to the furthest northeast point at Cape Kumliun (56 33'36"N.lat., 157 49'06"W.long.); and all waters northwest of a line from the southernmost cape at Weasel Mountain (56 27'40"N.lat, 158 11'05"W.long.) to the mouth of Through Creek (56 24'10"N.lat., 158 27'37"W.long.).

JUSTIFICATION:

Sockeye salmon catches have remained steady at an average of 5771 fish per day for the last three fishing days and coho salmon catches have been on an upswing; enough to warrant a three day fishery.

-Continued-

EMERGENCY ORDER NO. 4-F-L-26-93

Issued at: Kodiak, Ak
September 10, 1993

EFFECTIVE DATE: 6:00 A.M. Monday
September 13, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: until further
notice, or superseded by subsequent
emergency order.

EXPLANATION:

The Chignik Bay District of the Chignik Management Area, will open to commercial salmon fishing on a scheduled 3 day per week fishing period effective at 6:00 A.M. Monday, September 13, until 6:00 A.M. Thursday, September 16, until further notice. Fishing will be allowed up to the regulatory markers at Mensis Point in Chignik Lagoon. The Eastern, Central, Western, and Perryville Districts of the Chignik Management Area, will open to commercial salmon fishing on a scheduled 2 day per week period effective at 12:01 A.M. Monday, September 13, until 11:59 P.M. Tuesday, September 14, until further notice. Closed waters in the Western District will include all waters northwest of a line from Coal Cape to a point on the west side of Dorner Bay entrance at 55 57'N.lat., 158 40'W.long.. Markers in Ivanof Bay in the Perryville District will be the Road Island markers. All waters in the Central District will include all waters northwest of a line in Kujulik Bay from Brandel Point to the furthest northeast point on Cape Kumliun; and all waters northwest of a line from the southernmost cape at Weasel Mountain to the mouth of Through Creek in Chignik Bay.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken on a scheduled 3 day per week fishing period from 6:00 A.M. Monday, September 13, until 6:00 A.M. Thursday, September 16, until further notice.

(b) In the Eastern, Central, Western, and Perryville Districts, salmon may be taken on a scheduled 2 day per week fishing period from 12:01 A.M. Monday, September 13, until 11:59 P.M. Tuesday, September 14, until further notice.

5 AAC 15.320 is amended to read:

-Continued-

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay District will open to commercial salmon fishing on a scheduled 3 day per week fishing period from 6:00 A.M. Monday, September 13, until 6:00 A.M. Thursday, September 16, until further notice. The Eastern, Central, Western, and Perryville Districts will be open to commercial salmon fishing on a scheduled 2 day per week fishing period from 12:01 A.M. Monday, September 13, until 11:59 P.M. Tuesday, September 14, until further notice.

5AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:
(c) In the Western District, all waters northwest of a line from Coal Cape (55 53'28" N.lat., 159 00'20" W.long.) to a point on the west side of Dorner Bay entrance (55 57'N.lat., 158 40'W.long.).

(13) In the Perryville District, Ivanof Bay: all waters northwest of a line from a point on the northeast shore (55 52'28" N.lat., 159 28'18" W.long.) to a point on the north end of a spit at 55 51' N.lat., 159 30'54" W.long. (all waters northwest of Road Island are closed).

(e) The Central District includes all waters northwest of a line in Kujulik Bay from Brandel Point (56 38'40"N.lat., 158 50'24"W.long.) to the furthest northeast point at Cape Kumliun (56 33'36"N.lat., 157 49'06"W.long.); and all waters northwest of a line from the southernmost cape at Weasel Mountain (56 27'40"N.lat, 158 11'05"W.long.) to the mouth of Through Creek (56 24'10"N.lat., 158 27'37"W.long.).

JUSTIFICATION:

A three day per week fishing period in the Chignik Bay District; and a two day per week fishing period in the Eastern, Central, Western, and Perryville Districts will provide information to evaluate coho salmon run strength and allow harvest of sockeye salmon surplus to escapement requirements.

-Continued-

EMERGENCY ORDER NO. 4-F-L-27-93

Issued at: Kodiak, Ak
September 17, 1993

EFFECTIVE DATE: 6:00 A.M. Monday
September 20, 1993

Contact: Alan Quimby
Area Management Biologist

Expiration Date: 11:59 P.M.
Sunday, October 31, 1993 or
superseded by subsequent
emergency order.

EXPLANATION:

The Chignik Bay District of the Chignik Management Area, will open to commercial salmon fishing for scheduled 3 day per week fishing periods from 6:00 A.M. Mondays, until 6:00 A.M. Thursdays. Fishing will be allowed up to the regulatory markers at Mensis Point in Chignik Lagoon. The Eastern, Central, Western, and Perryville Districts of the Chignik Management Area, will open to commercial salmon fishing for scheduled 2 day per week fishing periods from 12:01 A.M. Mondays, until 11:59 P.M. Tuesdays. These fishing periods will be effective at 6:00 A.M. Monday, September 20 until 11:59 P.M. Sunday, October 31, 1993, the end of the salmon season.

REGULATION:

5 AAC 15.310 is amended to read:

5 AAC 15.310. FISHING SEASONS. (a) In the Chignik Bay District, salmon may be taken on scheduled 3 day per week fishing periods from 6:00 A.M. Mondays, until 6:00 A.M. Thursdays, until 11:59 P.M. Sunday, October 31, 1993.

(b) In the Eastern, Central, Western, and Perryville Districts, salmon may be taken on scheduled 2 day per week fishing periods from 12:01 A.M. Mondays, until 11:59 P.M. Tuesdays, until 11:59 P.M. Sunday, October 31, 1993.

5 AAC 15.320 is amended to read:

5 AAC 15.320. WEEKLY FISHING PERIODS. (a) The Chignik Bay District will open to commercial salmon fishing on scheduled 3 day per week fishing periods from 6:00 A.M. Mondays, until 6:00 A.M. Thursdays, until 11:00 P.M. Sunday, October 31, 1993. The

-Continued-

Eastern, Central, Western, and Perryville Districts will be open to commercial salmon fishing on scheduled 2 day per week fishing periods from 12:01 A.M. Mondays, until 11:59 P.M. Tuesdays, until 11:59 P.M. Sunday, October 31, 1993.

5AAC 15.350 is amended to read:

5AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters: as depicted on pages 20 and 21 in the 1993 Cook Inlet/Kodiak/Chignik Commercial Fishing Regulations book.

JUSTIFICATION:

A three day per week fishing period in the Chignik Bay District; and a two day per week fishing period in the Eastern, Central, Western, and Perryville Districts will provide information to evaluate coho salmon run strength and allow harvest of sockeye salmon surplus to escapement requirements.

Appendix E. Kodiak tides, 1993.

| Date | ---HIGH TIDE--- | | | ---HIGH TIDE--- | | | ---LOW TIDE--- | | | ----LOW TIDE--- | | |
|------|-----------------|----------|------|-----------------|------|------|----------------|------|------|-----------------|------|------|
| | | Time | Feet | | Time | Feet | | Time | Feet | | Time | Feet |
| May | 1 | 10:19 AM | 6.9 | 11:09 PM | 7.9 | | 4:15 AM | 2.1 | | 4:35 PM | 0.8 | |
| | 2 | 11:35 AM | 7.2 | 11:57 PM | 8.8 | | 5:25 AM | 1.0 | | 5:30 PM | 0.9 | |
| | 3 | : | | 12:39 PM | 7.5 | | 6:24 AM | -0.2 | | 6:23 PM | 0.9 | |
| | 4 | 0:44 AM | 9.5 | 1:37 PM | 7.7 | | 7:19 AM | -1.2 | | 7:11 PM | 1.0 | |
| | 5 | 1:27 AM | 10.1 | 2:28 PM | 7.9 | | 8:09 AM | -2.0 | | 7:58 PM | 1.1 | |
| | 6 | 2:11 AM | 10.4 | 3:18 PM | 7.9 | | 8:54 AM | -2.4 | | 8:43 PM | 1.3 | |
| | 7 | 2:55 AM | 10.4 | 4:06 PM | 7.7 | | 9:40 AM | -2.4 | | 9:28 PM | 1.6 | |
| | 8 | 3:39 AM | 10.2 | 4:54 PM | 7.4 | | 10:26 AM | -2.1 | | 10:13 PM | 1.9 | |
| | 9 | 4:22 AM | 9.6 | 5:42 PM | 7.1 | | 11:12 AM | -1.6 | | 11:00 PM | 2.3 | |
| | 10 | 5:07 AM | 8.9 | 6:33 PM | 6.8 | | 11:58 AM | -0.9 | | 11:50 PM | 2.7 | |
| | 11 | 5:53 AM | 8.1 | 7:27 PM | 6.6 | | : | | | 12:46 PM | -0.2 | |
| | 12 | 6:48 AM | 7.3 | 8:23 PM | 6.5 | | 0:49 AM | 3.1 | | 1:37 PM | 0.5 | |
| | 13 | 7:51 AM | 6.5 | 9:22 PM | 6.6 | | 1:57 AM | 3.2 | | 2:31 PM | 1.2 | |
| | 14 | 9:07 AM | 6.0 | 10:14 PM | 6.9 | | 3:16 AM | 3.0 | | 3:26 PM | 1.6 | |
| | 15 | 10:24 AM | 5.8 | 11:01 PM | 7.2 | | 4:30 AM | 2.5 | | 4:19 PM | 1.9 | |
| | 16 | 11:30 AM | 5.8 | 11:41 PM | 7.7 | | 5:29 AM | 1.9 | | 5:10 PM | 2.1 | |
| | 17 | : | | 12:26 PM | 6.0 | | 6:20 AM | 1.1 | | 5:55 PM | 2.2 | |
| | 18 | 0:18 AM | 8.1 | 1:16 PM | 6.3 | | 7:00 AM | 0.4 | | 6:34 PM | 2.2 | |
| | 19 | 0:55 AM | 8.5 | 1:57 PM | 6.5 | | 7:38 AM | -0.2 | | 7:13 PM | 2.2 | |
| | 20 | 1:29 AM | 8.9 | 2:39 PM | 6.7 | | 8:15 AM | -0.8 | | 7:52 PM | 2.2 | |
| | 21 | 2:04 AM | 9.2 | 3:17 PM | 6.9 | | 8:52 AM | -1.2 | | 8:30 PM | 2.3 | |
| | 22 | 2:38 AM | 9.3 | 3:56 PM | 6.9 | | 9:27 AM | -1.4 | | 9:06 PM | 2.3 | |
| | 23 | 3:14 AM | 9.4 | 4:34 PM | 6.9 | | 10:07 AM | -1.5 | | 9:48 PM | 2.4 | |
| | 24 | 3:53 AM | 9.3 | 5:16 PM | 6.9 | | 10:47 AM | -1.4 | | 10:31 PM | 2.5 | |
| | 25 | 4:34 AM | 9.0 | 6:03 PM | 6.9 | | 11:27 AM | -1.2 | | 11:19 PM | 2.6 | |
| | 26 | 5:20 AM | 8.5 | 6:51 PM | 7.0 | | : | | | 12:12 PM | -0.8 | |
| | 27 | 6:14 AM | 7.9 | 7:44 PM | 7.2 | | 0:19 AM | 2.5 | | 12:59 PM | -0.3 | |
| | 28 | 7:18 AM | 7.2 | 8:36 PM | 7.6 | | 1:26 AM | 2.5 | | 1:54 PM | 0.3 | |
| | 29 | 8:39 AM | 6.6 | 9:35 PM | 8.0 | | 2:44 AM | 2.1 | | 2:50 PM | 0.9 | |
| | 30 | 10:00 AM | 6.3 | 10:29 PM | 8.6 | | 4:01 AM | 1.4 | | 3:50 PM | 1.3 | |
| | 31 | 11:23 AM | 6.3 | 11:22 PM | 9.2 | | 5:13 AM | 0.5 | | 4:51 PM | 1.7 | |
| June | 1 | : | | 12:31 PM | 6.5 | | 6:15 AM | -0.5 | | 5:51 PM | 1.9 | |
| | 2 | 0:15 AM | 9.7 | 1:32 PM | 6.8 | | 7:08 AM | -1.3 | | 6:44 PM | 1.9 | |
| | 3 | 1:03 AM | 10.0 | 2:24 PM | 7.1 | | 7:58 AM | -1.9 | | 7:38 PM | 2.0 | |
| | 4 | 1:50 AM | 10.2 | 3:14 PM | 7.3 | | 8:45 AM | -2.2 | | 8:25 PM | 2.0 | |
| | 5 | 2:36 AM | 10.1 | 3:57 PM | 7.4 | | 9:27 AM | -2.2 | | 9:12 PM | 2.0 | |
| | 6 | 3:21 AM | 9.9 | 4:41 PM | 7.3 | | 10:10 AM | -2.0 | | 9:58 PM | 2.2 | |
| | 7 | 4:01 AM | 9.4 | 5:24 PM | 7.3 | | 10:49 AM | -1.5 | | 10:44 PM | 2.3 | |
| | 8 | 4:45 AM | 8.8 | 6:06 PM | 7.2 | | 11:31 AM | -1.0 | | 11:32 PM | 2.5 | |
| | 9 | 5:27 AM | 8.0 | 6:48 PM | 7.1 | | : | | | 12:11 PM | -0.3 | |
| | 10 | 6:14 AM | 7.2 | 7:33 PM | 7.0 | | 0:25 AM | 2.7 | | 12:49 PM | 0.4 | |
| | 11 | 7:06 AM | 6.4 | 8:19 PM | 7.1 | | 1:18 AM | 2.8 | | 1:31 PM | 1.0 | |
| | 12 | 8:07 AM | 5.7 | 9:08 PM | 7.2 | | 2:24 AM | 2.7 | | 2:13 PM | 1.7 | |
| | 13 | 9:23 AM | 5.3 | 9:55 PM | 7.4 | | 3:34 AM | 2.4 | | 3:02 PM | 2.2 | |
| | 14 | 10:45 AM | 5.1 | 10:45 PM | 7.7 | | 4:43 AM | 1.8 | | 3:57 PM | 2.6 | |
| | 15 | 11:54 AM | 5.3 | 11:30 PM | 8.1 | | 5:41 AM | 1.2 | | 4:53 PM | 2.8 | |
| | 16 | : | | 12:50 PM | 5.6 | | 6:31 AM | 0.5 | | 5:46 PM | 2.8 | |
| | 17 | 0:13 AM | 8.5 | 1:40 PM | 6.0 | | 7:13 AM | -0.2 | | 6:36 PM | 2.8 | |
| | 18 | 0:55 AM | 9.0 | 2:22 PM | 6.3 | | 7:54 AM | -0.8 | | 7:23 PM | 2.6 | |
| | 19 | 1:35 AM | 9.3 | 3:02 PM | 6.7 | | 8:33 AM | -1.4 | | 8:06 PM | 2.4 | |
| | 20 | 2:17 AM | 9.6 | 3:41 PM | 7.0 | | 9:12 AM | -1.7 | | 8:51 PM | 2.2 | |
| | 21 | 2:59 AM | 9.7 | 4:20 PM | 7.3 | | 9:51 AM | -1.9 | | 9:37 PM | 2.1 | |
| | 22 | 3:41 AM | 9.6 | 5:00 PM | 7.5 | | 10:28 AM | -1.9 | | 10:23 PM | 1.9 | |
| | 23 | 4:26 AM | 9.3 | 5:40 PM | 7.8 | | 11:09 AM | -1.6 | | 11:15 PM | 1.8 | |
| | 24 | 5:15 AM | 8.7 | 6:22 PM | 8.0 | | 11:48 AM | -1.2 | | | | |
| | 25 | 6:07 AM | 7.9 | 7:10 PM | 8.2 | | 0:11 AM | 1.7 | | 12:33 PM | -0.4 | |
| | 26 | 7:07 AM | 7.0 | 8:00 PM | 8.4 | | 1:15 AM | 1.5 | | 1:20 PM | 0.4 | |
| | 27 | 8:23 AM | 6.2 | 8:57 PM | 8.6 | | 2:26 AM | 1.3 | | 2:11 PM | 1.2 | |

-Continued-

Appendix E. (page 2 of 3)

| Date | ---HIGH TIDE--- | | ---HIGH TIDE--- | | ---LOW TIDE--- | | ---LOW TIDE--- | |
|---------|-----------------|------|-----------------|------|----------------|------|----------------|------|
| | Time | Feet | Time | Feet | Time | Feet | Time | Feet |
| June 28 | 9:47 AM | 5.7 | 9:57 PM | 8.8 | 3:44 AM | 0.9 | 3:13 PM | 1.9 |
| 29 | 11:14 AM | 5.6 | 10:58 PM | 9.1 | 4:58 AM | 0.2 | 4:19 PM | 2.4 |
| 30 | 12:28 AM | 5.9 | 11:54 PM | 9.4 | 6:03 AM | -0.4 | 5:28 PM | 2.6 |
| July 1 | : | | 1:27 PM | 6.3 | 7:00 AM | -1.1 | 6:28 PM | 2.5 |
| 2 | 0:50 AM | 9.6 | 2:17 PM | 6.7 | 7:50 AM | -1.5 | 7:23 PM | 2.4 |
| 3 | 1:38 AM | 9.8 | 3:01 PM | 7.0 | 8:33 AM | -1.8 | 8:14 PM | 2.2 |
| 4 | 2:24 AM | 9.7 | 3:41 PM | 7.3 | 9:14 AM | -1.8 | 9:00 PM | 2.0 |
| 5 | 3:06 AM | 9.5 | 4:20 PM | 7.5 | 9:52 AM | -1.6 | 9:42 PM | 2.0 |
| 6 | 3:45 AM | 9.2 | 4:55 PM | 7.6 | 10:24 AM | -1.3 | 10:23 PM | 2.0 |
| 7 | 4:23 AM | 8.6 | 5:29 PM | 7.6 | 11:00 AM | -0.8 | 11:05 PM | 2.0 |
| 8 | 5:03 AM | 8.0 | 6:04 PM | 7.5 | 11:32 AM | -0.3 | 11:50 PM | 2.1 |
| 9 | 5:40 AM | 7.2 | 6:38 PM | 7.5 | : | | 12:04 PM | 0.4 |
| 10 | 6:25 PM | 6.5 | 7:18 PM | 7.5 | 0:38 AM | 2.2 | 12:35 PM | 1.1 |
| 11 | 7:18 PM | 5.7 | 7:57 PM | 7.4 | 1:32 AM | 2.2 | 1:10 PM | 1.7 |
| 12 | 8:24 AM | 5.1 | 8:50 PM | 7.5 | 2:37 AM | 2.1 | 1:55 PM | 2.3 |
| 13 | 9:48 AM | 4.7 | 9:43 PM | 7.6 | 3:50 AM | 1.9 | 2:48 PM | 2.8 |
| 14 | 11:17 AM | 4.8 | 10:41 PM | 7.9 | 4:59 AM | 1.4 | 3:53 PM | 3.1 |
| 15 | 12:26 AM | 5.2 | 11:35 PM | 8.4 | 5:58 AM | 0.7 | 5:04 PM | 3.2 |
| 16 | | | 1:16 PM | 5.7 | 6:47 AM | -0.1 | 6:05 PM | 3.0 |
| 17 | 0:28 AM | 8.9 | 1:58 PM | 6.3 | 7:31 AM | -0.8 | 6:58 PM | 2.6 |
| 18 | 1:16 AM | 9.4 | 2:37 PM | 6.9 | 8:12 AM | -1.4 | 7:49 PM | 2.1 |
| 19 | 2:01 AM | 9.8 | 3:15 PM | 7.4 | 8:49 AM | -1.8 | 8:36 PM | 1.6 |
| 20 | 2:45 AM | 9.9 | 3:51 PM | 7.9 | 9:27 AM | -2.0 | 9:24 PM | 1.2 |
| 21 | 3:30 AM | 9.8 | 4:30 PM | 8.4 | 10:06 AM | -1.9 | 10:12 PM | 0.8 |
| 22 | 4:16 AM | 9.4 | 5:09 PM | 8.7 | 10:43 AM | -1.5 | 11:03 PM | 0.6 |
| 23 | 5:03 AM | 8.7 | 5:50 PM | 8.9 | 11:24 AM | -0.9 | 11:58 PM | 0.5 |
| 24 | 5:58 AM | 7.8 | 6:35 PM | 8.9 | : | | 12:04 PM | 0.0 |
| 25 | 6:57 AM | 6.8 | 7:26 PM | 8.8 | 0:57 AM | 0.6 | 12:50 PM | 0.9 |
| 26 | 8:12 PM | 5.9 | 8:23 PM | 8.7 | 2:07 AM | 0.7 | 1:39 PM | 1.7 |
| 27 | 9:39 PM | 5.3 | 9:30 PM | 8.6 | 3:23 AM | 0.6 | 2:44 PM | 2.5 |
| 28 | 11:10 AM | 5.3 | 10:40 PM | 8.7 | 4:45 AM | 0.3 | 4:00 PM | 2.9 |
| 29 | 12:24 AM | 5.7 | 11:44 PM | 8.8 | 5:55 AM | -0.2 | 5:17 PM | 3.0 |
| 30 | : | | 1:21 PM | 6.2 | 6:52 AM | -0.6 | 6:22 PM | 2.7 |
| 31 | 0:40 AM | 9.1 | 2:04 PM | 6.7 | 7:38 AM | -1.0 | 7:17 PM | 2.3 |
| Aug 1 | 1:29 AM | 9.2 | 2:43 PM | 7.2 | 8:17 AM | -1.2 | 8:04 PM | 1.9 |
| 2 | 2:12 AM | 9.3 | 3:16 PM | 7.5 | 8:54 AM | -1.2 | 8:46 PM | 1.6 |
| 3 | 2:51 AM | 9.1 | 3:47 PM | 7.8 | 9:26 AM | -1.1 | 9:25 PM | 1.4 |
| 4 | 3:29 AM | 8.9 | 4:16 PM | 7.9 | 9:54 AM | -0.8 | 10:01 PM | 1.2 |
| 5 | 4:04 AM | 8.4 | 4:47 PM | 8.0 | 10:25 AM | -0.4 | 10:39 PM | 1.2 |
| 6 | 4:39 AM | 7.9 | 5:16 PM | 8.0 | 10:52 AM | 0.1 | 11:16 PM | 1.3 |
| 7 | 5:15 AM | 7.2 | 5:45 PM | 7.9 | 11:20 AM | 0.7 | 11:57 PM | 1.4 |
| 8 | 5:53 AM | 6.5 | 6:17 PM | 7.7 | 11:50 AM | 1.3 | : | |
| 9 | 6:38 AM | 5.8 | 6:57 PM | 7.6 | 0:43 AM | 1.6 | 12:22 PM | 2.0 |
| 10 | 7:36 AM | 5.1 | 7:44 PM | 7.5 | 1:42 AM | 1.8 | 12:59 PM | 2.5 |
| 11 | 9:03 AM | 4.6 | 8:47 PM | 7.4 | 2:51 AM | 1.8 | 1:51 PM | 3.1 |
| 12 | 10:42 AM | 4.7 | 10:00 PM | 7.6 | 4:13 AM | 1.5 | 3:08 PM | 3.4 |
| 13 | 11:55 AM | 5.2 | 11:06 PM | 8.1 | 5:22 AM | 0.9 | 4:32 PM | 3.3 |
| 14 | : | | 12:47 PM | 5.8 | 6:15 AM | 0.1 | 5:44 PM | 2.9 |
| 15 | 0:05 AM | 8.7 | 1:29 PM | 6.6 | 7:02 AM | -0.6 | 6:42 PM | 2.2 |
| 16 | 0:57 AM | 9.2 | 2:05 PM | 7.4 | 7:43 AM | -1.2 | 7:35 PM | 1.4 |
| 17 | 1:46 AM | 9.7 | 2:40 PM | 8.1 | 8:22 AM | -1.5 | 8:22 PM | 0.6 |
| 18 | 2:33 AM | 9.9 | 3:18 PM | 8.8 | 8:59 AM | -1.6 | 9:10 PM | -0.1 |
| 19 | 3:20 AM | 9.7 | 3:54 PM | 9.3 | 9:39 AM | -1.4 | 9:58 PM | -0.5 |
| 20 | 4:06 AM | 9.3 | 4:34 PM | 9.6 | 10:15 AM | -1.0 | 10:48 PM | -0.7 |
| 21 | 4:55 AM | 8.5 | 5:16 PM | 9.6 | 10:55 AM | -0.3 | 11:40 PM | -0.6 |
| 22 | 5:48 AM | 7.6 | 6:01 PM | 9.4 | 11:37 AM | 0.6 | : | |
| 23 | 6:49 AM | 6.6 | 6:51 PM | 8.9 | 0:38 AM | -0.2 | 12:22 PM | 1.5 |
| 24 | 8:01 PM | 5.8 | 7:55 PM | 8.5 | 1:42 AM | 0.2 | 1:16 PM | 2.3 |
| 25 | 9:33 PM | 5.3 | 9:09 PM | 8.1 | 3:01 AM | 0.5 | 2:27 PM | 3.0 |

-Continued-

Appendix E. (page 3 of 3)

| Date | | ---HIGH TIDE--- | | ---HIGH TIDE--- | | ---LOW TIDE--- | | ---LOW TIDE--- | |
|------|----|-----------------|------|-----------------|------|----------------|------|----------------|------|
| | | Time | Feet | Time | Feet | Time | Feet | Time | Feet |
| Aug | 26 | 11:03 AM | 5.5 | 10:27 PM | 8.0 | 4:27 AM | 0.4 | 3:56 PM | 3.2 |
| | 27 | 12:11 AM | 5.9 | 11:36 PM | 8.1 | 5:38 AM | 0.3 | 5:18 PM | 3.0 |
| | 28 | : | | 1:00 PM | 6.5 | 6:34 AM | 0.0 | 6:23 PM | 2.5 |
| | 29 | 0:32 AM | 8.4 | 1:39 PM | 7.0 | 7:16 AM | -0.3 | 7:11 PM | 1.9 |
| | 30 | 1:19 AM | 8.6 | 2:11 PM | 7.5 | 7:53 AM | -0.4 | 7:53 PM | 1.4 |
| | 31 | 1:59 AM | 8.7 | 2:39 PM | 7.9 | 8:25 AM | -0.4 | 8:28 PM | 1.0 |
| Sept | 1 | 2:38 AM | 8.6 | 3:08 PM | 8.2 | 8:54 AM | -0.3 | 9:04 PM | 0.6 |
| | 2 | 3:11 AM | 8.4 | 3:36 PM | 8.3 | 9:20 AM | -0.1 | 9:36 PM | 0.4 |
| | 3 | 3:45 AM | 8.1 | 4:01 PM | 8.4 | 9:47 AM | 0.3 | 10:11 PM | 0.3 |
| | 4 | 4:18 AM | 7.6 | 4:30 PM | 8.4 | 10:13 AM | 0.7 | 10:46 PM | 0.4 |
| | 5 | 4:54 AM | 7.1 | 4:57 PM | 8.2 | 10:41 AM | 1.2 | 11:25 PM | 0.6 |
| | 6 | 5:29 AM | 6.5 | 5:27 PM | 8.0 | 11:11 AM | 1.8 | : | |
| | 7 | 6:12 AM | 5.8 | 6:04 PM | 7.8 | 0:07 AM | 0.9 | 11:41 PM | 2.3 |
| | 8 | 7:08 AM | 5.2 | 6:49 PM | 7.5 | 0:57 AM | 1.2 | 12:20 PM | 2.8 |
| | 9 | 8:27 AM | 4.9 | 7:55 PM | 7.3 | 2:03 AM | 1.4 | 1:16 PM | 3.3 |
| | 10 | 10:03 AM | 5.0 | 9:18 PM | 7.3 | 3:21 AM | 1.3 | 2:44 PM | 3.5 |
| | 11 | 11:18 AM | 5.5 | 10:37 PM | 7.7 | 4:35 AM | 0.9 | 4:15 PM | 3.2 |
| | 12 | 12:08 AM | 6.3 | 11:43 PM | 8.2 | 5:38 AM | 0.4 | 5:28 PM | 2.5 |
| | 13 | : | | 12:47 PM | 7.2 | 6:24 AM | -0.2 | 6:28 PM | 1.5 |
| | 14 | 0:42 AM | 8.8 | 1:27 PM | 8.1 | 7:08 AM | -0.6 | 7:21 PM | 0.4 |
| | 15 | 1:32 AM | 9.2 | 2:04 PM | 9.0 | 7:50 AM | -0.9 | 8:06 PM | -0.6 |

CHIGNIK AREA

CHAPTER 15. - CHIGNIK AREA

ARTICLE 1. - DESCRIPTION OF AREA

5 AAC 15.001. APPLICATION OF THIS CHAPTER. Requirements set forth in this chapter apply to commercial fishing only, unless otherwise specified. Subsistence fishing regulations affecting commercial fishing vessels or affecting any other commercial fishing activity are set forth in the subsistence fishing regulations in 5 AAC 01 and 5 AAC 02.

5 AAC 15.100. DESCRIPTION OF AREA. The Chignik Area includes all waters of Alaska on the south side of the Alaska Peninsula enclosed by 156°20'13" W.long., (the longitude of the southern entrance to Imuya Bay near Kilokak Rocks) and a line extending 135° southeast from Kupreanof Point.

ARTICLE 2. - FISHING DISTRICTS

5 AAC 15.200. FISHING DISTRICTS. (a) The Eastern District includes all waters from the southernmost marker 500 yards from the mouth of Aniakchak Lagoon to the eastern boundary of the Chignik Area

(1) Agripina Section: all waters between Kilokak Rocks at 57°11'22" N.lat., 156°20'12" W.long., and Cape Providence at 56°58'40" N.lat., 156°33'28" W.long.;

(2) Chiginagak Section: all waters between Cape Providence at 56°58'40" N.lat., 156°33'28" W.long., and Cape Kuyuyukak at 56°53'54" N.lat., 156°49'43" W.long.;

(3) Nakalilok-Yantarni Section: all waters between Cape Kuyuyukak at 56°53'54" N.lat., 156°49'43" W.long., and Cape Kunmik at 56°45'53" N.lat., 157°11'53" W.long.;

(4) Big River Section: all waters of Amber and Aniakchak Bays bounded by 175°11'53" W.long., and the latitude of the southernmost marker 500 yards from the mouth of Aniakchak Lagoon;

(b) The Chignik Bay District includes all waters of Chignik Bay and Lagoon west of a line from Jack Point at 56°18'17" N.lat., 158°14'54" W.long., to Neketa Creek at 56°24'10" N.lat., 158°27'37" W.long.

(c) The Western District includes all waters south and west of Jack Point at 56°17'32" N.lat., 158°11'56" W.long., excluding the waters of Chignik Lagoon, to Coal Cape at 55°53'28" N.lat., 159°00'20" W.long.

(1) Castle Cape Section: all waters between Jack Point at 56°17'32" N.lat., 158°11'56" W.long., and Cape Ikta at 55°58'45" N.lat., 158°30' W.long.;

(2) Dorner Bay Section: all waters between Cape Ikta at 55°58'45" N.lat., 158°30' W.long., and a point on the west side of Dorner (Kuiukta) Bay's entrance at 55°57' N.lat., 158°40' W.long.;

(3) Mitrofanina Section: all waters, including Mitrofanina Island between a point on the west side of Dorner (Kuiukta) Bay's entrance at 55°57' N.lat., 158°40' W.long., and Stirni Point at 55°54'50" N.lat., 158°55' W.long.;

(4) Anchor Bay Section: all waters between Stirni Point at 55°54'50" N.lat., 158°55' W.long., and Coal Cape at 55°53'28" N.lat., 159°00'20" W.long.

(d) The Perryville District includes all waters between Coal Cape at 55°53'28" N.lat., 159°00'20" W.long. and Kupreanof Point at 55°33'55" N.lat., 159°35'50" W.long.

(1) Perryville Section: all waters including Chiachi Islands, between Coal Cape at 55°53'28" N.lat., 159°00'20" W.long., and Coal Point at 55°51'31" N.lat., 159°18'50" W.long.;

(2) Humpback Bay Section: all waters including Paul and Jacob islands, between Coal Point at 55°51'31" N.lat., 159°18'50" W.long., and Alexander Point at 55°47'22" N.lat., 159°24'34" W.long.;

(3) Ivanof Bay Section: all waters between Alexander Point at 55°47'22" N.lat., 159°24'34" W.long., and Kupreanof Point at 55°33'55" N.lat., 159°35'50" W.long.

(e) The Central District includes all waters, excluding the waters of the Chignik Bay District between a point near Jack Bay at 56°18'17" N.lat., 158°14'54" W.long., and the southernmost marker 500 yards from the mouth of Aniakchak Lagoon.

(1) Cape Kumlik Section: all waters, including Sutwik Island, between the latitude of the southernmost marker 500 yards from the mouth of Aniakchak Lagoon and 157°40'25" W.long., on the southwest side of Cape Kumlik;

(2) Kujulik Section: all waters between a point on the southwest side of Cape Kumlik at 56°36'32" N.lat., 157°40'25" W.long., and a point on Cape Kumliun at 56°28'34" N.lat., 157°51'26" W.long.;

(3) Outer Chignik Bay Section: all waters including Nakchamik Island between a point on Cape Kumliun at 56°28'34" N.lat., 157°51'26" W.long., and a point near Jack Bay at 56°18'17" N.lat., 158°14'54" W.long., excluding the Chignik Bay District.

ARTICLE 3. - SALMON FISHERY

5 AAC 15.310. FISHING SEASONS.(a) In the Chignik Bay District, salmon may be taken only from June 1 through October 31.

(b) The Perryville, Western, Central, and Eastern districts are opened by emergency order.

5 AAC 15.320. WEEKLY FISHING PERIODS.(a) Salmon fishing periods shall be established by emergency order.

5 AAC 15.330. GEAR.(a) Salmon may be taken only by purse seine or hand purse seine.

5 AAC 15.332. SEINE SPECIFICATIONS AND OPERATION.(a) In the Eastern, Central, Western and Perryville districts, no purse seine less than 100 fathoms or more than 225 fathoms in length may be used.

(b) In the Eastern, Central, Western, and Perryville districts, no hand purse seines less than 100 fathoms or more than 225 fathoms in length may be used.

(c) In the Chignik Bay District, purse seines and hand purse seines may not be less than 100 fathoms or more than 125 fathoms in length.

(d) No seine may be less than three fathoms nor more than 375 meshes in depth; in addition, up to twenty-five meshes of chafing gear with a maximum mesh size of seven inches may be used.

(e) No lead may be more than 75 fathoms in length. The aggregate length of seine and lead may not be more than 225 fathoms in the Eastern, Central, Western, and Perryville districts.

CHIGNIK AREA

(D) When a purse seine or hand purse seine is in the water for the purpose of taking fish, the seine shall be attached to the licensed vessel operating the gear.

5 AAC 15.350. CLOSED WATERS. Salmon may not be taken in the following waters:

(1) Chignik Lagoon

(A) southwest of a line from the tip of Hume Point to the north side of Chignik Island (56°17'25" N.lat., 158°35'30" W.long.);

(B) Mallard Duck Bay: southwest of a line from the tip of Green Point to Chignik Island (56°16'38" N.lat., 158°34'54" W.long.);

(2) Kilokak Rocks Bay: northwest of a line from the southern entrance of the bay at 57°09'50" N.lat., 156°20'40" W.long., then to the opposite shore 500 yards northeast of the mouth of Kilokak Rocks Creek at 57°10'07" N.lat., 156°20'40" W.long.;

(3) Agripina River: west of a line from 57°06'46" N.lat., 156°28' W.long., to 57°06'35" N.lat., 156°28'30" W.long.;

(4) Chiginagak Bay: north of a line from 57°00'33" N.lat., 156°45'38" W.long., to 57°01'48" N.lat., 156°41'51" W.long.;

(5) Nakalilok Lagoon: the lagoon and within 500 yards of the entrance:

(6) Yantarni Lagoon: the lagoon and within 500 yards of the entrance:

(7) Aniakchak River: northwest of a line from approximately 500 yards northeast of the mouth at 56°45'43" N.lat., 157°28'46" W.long., to a marker on the southern tip of the island directly off the mouth and then to approximately 1,000 yards southwest of the mouth at 56°45'20" N.lat., 157°31' W.long.;

(8) Aniakchak Lagoon: the lagoon and within 500 yards of the entrance;

(9) Kujulik Bay: the southwest end of the bay southwest of a line from 56°35'51" N. lat., 157°59' W. long., to the opposite shore at 56°34'30" N. lat., 157°57'30" W. long.;

(10) Portage Bay: west of a line from 56°11'40" N.lat., 158°33' W.long., to 56°10'38" N. lat., 158°33' W. long.;

(11) Ivan Bay: north of a line from the marker on the northwest shore 1,000 yards from the stream mouth to the marker on the southeast shore 750 yards from the stream mouth;

(12) Humpback Bay: within 1,000 yards of the terminus of Humpback Bay stream (275-502) at 55°51'30" N.lat., 159°20' W.long.;

(13) Ivanof Bay: all waters northwest of a line from a point on the northeast shore at 55°52'28" N. lat., 159°28'18" W. long. to a point on the north end of the spit at 55°51' N. lat., 159°30'54" W. long. (all waters northwest of Round Island are closed);

(14) Alfred Creek (271-104): before August 1, the 500 yard closure at the terminus does not apply; the 500 yard closure does apply from August 1 to the end of the salmon fishing season;

(15) Dago Frank Creek (271-105): before August 1, the 500 yard closure at the terminus does not apply; the 500 yard closure does apply from August 1 to the end of the salmon fishing season;

CHIGNIK AREA

(16) Hook Bay: northwest of a line from the tip of Hook Bay Spit at 56°30'07" N.lat., 158°08'04" W.long., to a point on the north side of the bay at 56°31'07" N.lat., 158°07'32" W.long.

(17) Unnamed stream at 55°49'02" N.lat., 159°24'15" W.long.; the 500 yard closure at the terminus does not apply.

(18) Lake Bay: all waters southwest of a line drawn at the entrance to Lake Bay at 56°18'51" N. lat., 158°17'30" W. long. extending across the entrance to Lake Bay;

(19) Mud Bay: all waters southwest of a line from 56°19'28" N. lat., 158°25'12" W. long. extending across the entrance to Mud Bay.

5 AAC 15.355.REPORTING REQUIREMENTS.(a) The operator of a floating salmon processing vessel or tender, or a shorebased processing operation, and a company employing aircraft used for transporting salmon, shall report in person, or by radio or telephone, to a local representative of the department located in the management area of intended operation before the start of processing or buying operations. The report must include the location and the date of intended operation, and identify and describe each vessel or other method of transport employed in hauling or processing salmon.

(b) A commercial fisherman shall report, on an ADF&G fish ticket at the time of landing, the number of salmon taken but not sold.

5 AAC 15.360. EASTERN DISTRICT SALMON MANAGEMENT PLAN.(a) The department shall open and close the Eastern District for commercial salmon fishing concurrently with the Chignik Bay and Central districts. The department may close the Eastern District for the period between the first (Black Lake) and second (Chignik Lake) sockeye salmon runs.

(b) The department shall close the Eastern District on July 15 to allow evaluation of the strength of the pink and chum salmon runs.

(c) The department shall close the Eastern District when it determines that the salmon being harvested in that district are from stocks that do not originate from spawning areas located in the Chignik Area.

Appendix G. Statistical weeks and corresponding calendar dates for 1993.

| Statistical Week | Calendar Dates | Statistical Week | Calendar Dates |
|---------------------|------------------|---------------------|------------------|
| 1 | 01-Jan to 03-Jan | 28 | 05-Jul to 11-Jul |
| 2 | 04-Jan to 10-Jan | 29 | 12-Jul to 18-Jul |
| 3 | 11-Jan to 17-Jan | 30 | 19-Jul to 25-Jul |
| 4 | 18-Jan to 24-Jan | 31 | 26-Jul to 01-Aug |
| 5 | 25-Jan to 31-Feb | 32 | 02-Aug to 08-Aug |
| 6 | 01-Feb to 07-Feb | 33 | 09-Aug to 15-Aug |
| 7 | 08-Feb to 14-Feb | 34 | 16-Aug to 22-Aug |
| 8 | 15-Feb to 21-Feb | 35 | 23-Aug to 29-Aug |
| 9 | 22-Feb to 28-Feb | 36 | 30-Aug to 05-Sep |
| 10 | 01-Mar to 07-Mar | 37 | 06-Sep to 12-Sep |
| 11 | 08-Mar to 14-Mar | 38 | 13-Sep to 19-Sep |
| 12 | 15-Mar to 21-Mar | 39 | 20-Sep to 26-Sep |
| 13 | 22-Mar to 28-Mar | 40 | 27-Sep to 03-Oct |
| 14 | 29-Apr to 04-Apr | 41 | 04-Oct to 10-Oct |
| 15 | 05-Apr to 11-Apr | 42 | 11-Oct to 17-Oct |
| 16 | 12-Apr to 18-Apr | 43 | 18-Oct to 24-Oct |
| 17 | 19-Apr to 25-Apr | 44 | 25-Oct to 31-Oct |
| 18 | 26-Apr to 02-May | 45 | 01-Nov to 07-Nov |
| 19 | 03-May to 09-May | 46 | 08-Nov to 14-Nov |
| 20 | 10-May to 16-May | 47 | 15-Nov to 21-Nov |
| 21 | 17-May to 23-May | 48 | 22-Nov to 28-Nov |
| 22 | 24-May to 30-May | 49 | 29-Nov to 05-Dec |
| 23 | 31-May to 06-Jun | 50 | 06-Dec to 12-Dec |
| 24 | 07-Jun to 13-Jun | 51 | 13-Dec to 19-Dec |
| 25 | 14-Jun to 20-Jun | 52 | 20-Dec to 26-Dec |
| 26 | 21-Jun to 27-Jun | 53 | 27-Dec to 31-Dec |
| 27 | 28-Jun to 04-Jul | | |

Appendix H. Chignik Management Area forecast for sockeye, 1994.

FORECAST AREA: Chignik Management Area

Species: Sockeye salmon

PRELIMINARY FORECAST OF THE 1994 RUN

| | Point Estimate | 80% Prediction Forecast Range |
|------------------------------------|-------------------|-------------------------------------|
| <u>Early Run</u> (Black Lake) | | |
| Total Run: | 1,800,000 | 1,200,000 to 2,400,000 |
| Escapement: | 400,000 | |
| Catch: | 1,400,000 | |
| <u>Late Run</u> (Chignik Lake) | | |
| Total Run: | 1,300,000 | 940,000 to 1,600,000 |
| Escapement: | 250,000 | |
| Catch: | 1,050,000 | |
| <u>Total Chignik Run</u> | | |
| Total Run: | 3,100,000 | 2,140,000 to 4,000,000 |
| Escapement: | 650,000 | |
| Catch: | 2,450,000 | |

FORECAST METHODS:

The estimated run to Black Lake is the sum of a regression estimate for two major age classes (ages 1.3 and 2.3) and a 10-year average for minor age classes, while the Chignik Lake run is based on recruit per spawner relationships. The Black Lake forecast is based on the historical relationship between the number and length of prior year age 1.2 fish, and the parent year escapement number. All other age classes are predicted from a 10-year average. The Chignik Lake forecast accuracy has historically been quite variable, and developing a model such as the one used for the Black Lake run has been unsuccessful. The Chignik Lake run forecast for 1994 was derived using average return per spawner relationships for each year class for years post 1969.

DISCUSSION OF THE 1994 FORECAST:

Early Run

The 1994 Black Lake sockeye salmon run is expected to be 1.8 million fish. This is approximately 0.1 million fish more than the 1984-92 average run of 1.7 million fish and 200,000 fish more than the 1993 forecast. This above average run is expected because in 1993 age 1.2 fish were about 50% more abundant than the 10-year average.

Late Run

The estimated 1994 Chignik Lake sockeye run is 1.3 million fish, .2 million more than the 1983-92 average of 1.1 million fish. The Chignik Lake run forecast accuracy has historically been quite poor when compared to actual returns. The major returning year classes are primarily age 5 and 6 year olds. For the 5-year olds, the 1988 parent year escapement of 557,171 is 300,000 over the optimum of 250,000. Overescapements of this magnitude have historically resulted in low recruit per spawner relationships (<1). For the 6-year olds, the 1989 parent year escapement of 255,180 was close to the desired goal. Returns at this level have been variable; the post 1969 average of 2.8 per spawner.

Prepared By:
Alan Quimby
Area Management Biologist
Chignik Area ADF&G

David Owen
Assistant Area Biologist
Chignik Area ADF&G

Chignik Management Area
1994 Harvest Projections
(in millions)

| <u>Chinook</u> ¹ | <u>Sockeye</u> ² | <u>Coho</u> ³ | <u>Pink</u> ⁴ | <u>Chum</u> ⁵ | <u>Total</u> |
|-----------------------------|-----------------------------|--------------------------|--------------------------|--------------------------|--------------|
| .007 | 1.9 | 0.2 | 1.3 | 0.2 | 3.6 |

¹ Chinook harvest is dependent upon the amount of fishing time allowed for sockeye salmon in July; the harvest projection approximates a 10-year average.

² Estimate does not include the Cape Igvak and Southeast Mainland District intercept fisheries (22% allocation) which equates to approximately 539,000 Chignik bound sockeye salmon through July 25.

³ Coho salmon harvest is related to the strength of the Chignik Lake sockeye run. Lagoon and outside catches are based on a 10-year average.

⁴ The pink salmon forecast is computed by multiplying the average recruit per spawner for the previous 10-years by the parent year escapement. The catch projection is driven by escapements to the Central/Eastern and Western/Perryville Districts. The largest pink catches should come from the Central/Eastern Districts and could account for 70% of the projected total.

⁵ The chum salmon forecast is computed by multiplying the parent year escapement by an average recruit per spawner relationship based on escapements similar to that in 1990. Western/Perryville Districts should experience the largest proportion of the catch.

Appendix I. The Chignik Management Area salmon fishery in Chignik Lagoon as compared to outside districts, 1974 - 1993.

A special research project outlining the historical fishery in the Chignik Management Area (from 1974) comparing catches in the Chignik Lagoon District to all other districts, was presented to a 1993 Chignik Management Advisory Committee. The project's purpose was to address questions forwarded by the Chignik Seiners Association intended to clarify a subsistence board proposal brought before the Advisory Committee.

Catches of sockeye salmon in Chignik Lagoon over the last 30 years has decreased from a high in the late 70's of approximately 90% of the total area catch to approximately 45% in 1993 (Figure 1). The trend line has not been steady but influenced by large runs of sockeye or pink salmon, oil spills, boycotts and strikes when more fishing time was allowed outside the Chignik Lagoon. However, using 1975 as the base line year, the percent increase over the previous year shows a general increase in the fishery occurring in outside districts (Figure 2).

The growth of the sockeye fishery in the outside districts has been mostly within the Central District where increases within the district mirrors decreases within Chignik Lagoon. (Figure 3 and 4). Harvests from other districts have been historically a minor component with each area having peak years (Figure 5).

The catch per boat for Chignik Lagoon as compared to outside districts for all species has fluctuated over the years with a clear divergence and predominance of catches in outside districts beginning in 1991 (Figure 6 and 7). For sockeye salmon per boat, 1993 was the first year that the catch per boat was higher outside the lagoon (Figure 7 and 8).

The number of boats and landings in outside districts has been historically less than that of the lagoon. However, in recent years the trend is towards an equal number of boats and landings reported outside as compared to inside the lagoon (Figure 9). The number of boats fishing in the lagoon has remained relatively stable with the last few years showing a downturn, while the number of boats fishing in the outside districts has fluctuated with a general increase in the number of boats fishing the outside districts in recent years (Figure 10).

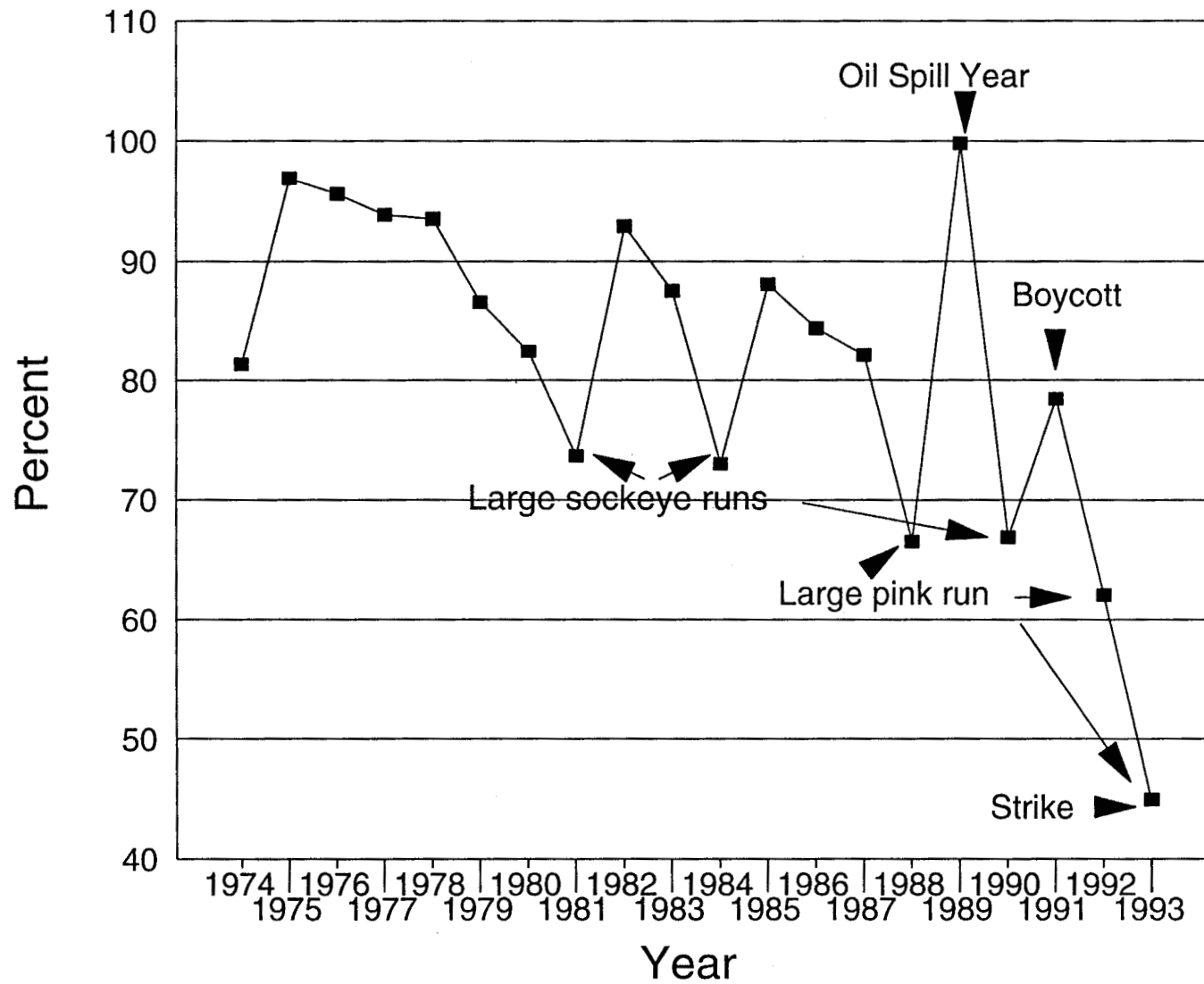
In 1993 some permit holders reported sockeye harvests entirely within the lagoon (16) while others fished entirely outside (12) with the vast majority (74) fishing some percentage within and without the lagoon (Figure 11). In 1986, 75 permit holders caught at least 90% of their sockeye salmon within the lagoon while 6 fished entirely in outside district (Figure 12). Harvest distribution was more balanced in 1993 as compared to 1986 between the extreme fishing strategies: inside versus outside lagoon sockeye harvests (Figure 13 and 14). The catch per unit effort for 1993 was higher in outside districts while in 1986 it was higher in the lagoon (Figure 15 and 16).

-Continued-

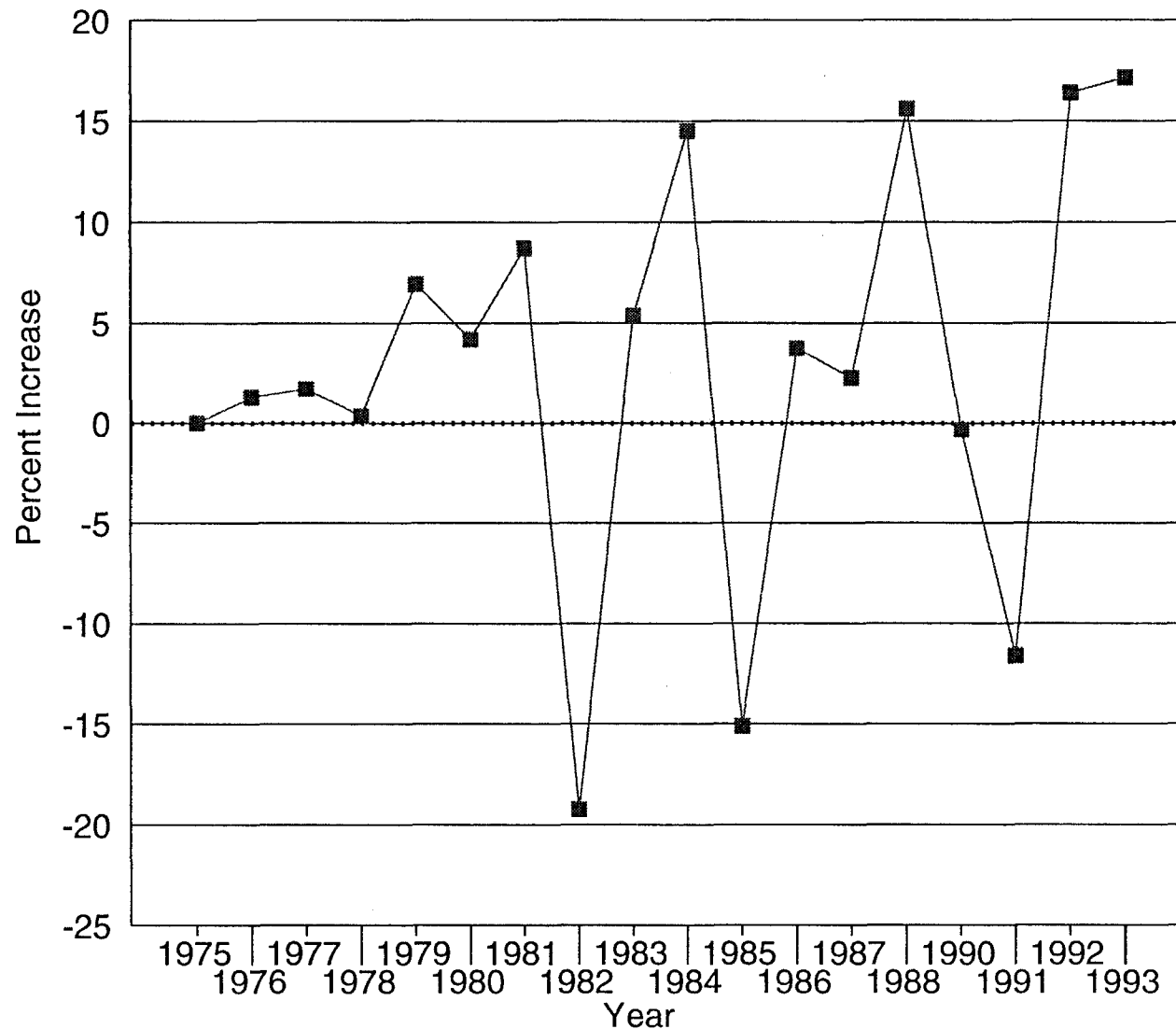
From 1974 catches of sockeye salmon from the outside districts has been mainly from the Central District with a general trend of larger catches in recent years. Pink salmon have generally dominated catches from Western and Perryville Districts and for some years in the Eastern District (Figure 17). Three sections within the Central District have contributed little catch: 27220, 27240, and 27264 (Figure 18).

Average run timing in the Chignik Management Area (since 1983) shows very little catch of any species except sockeye salmon in June, peak catches of chum and pink salmon in late July and early August, and large coho catches in September (Figure 19). Comparing inside versus outside district sockeye catches for the months of June and July 1976-1993, shows that most of the sockeye salmon were caught in the lagoon until recent years. Since July 1992 and June 1993, more sockeye were caught in outside districts than in the lagoon (Figure 20). The catch per unit effort is higher in June and July, and lower in August and September in outside districts compared to the lagoon (Figure 21).

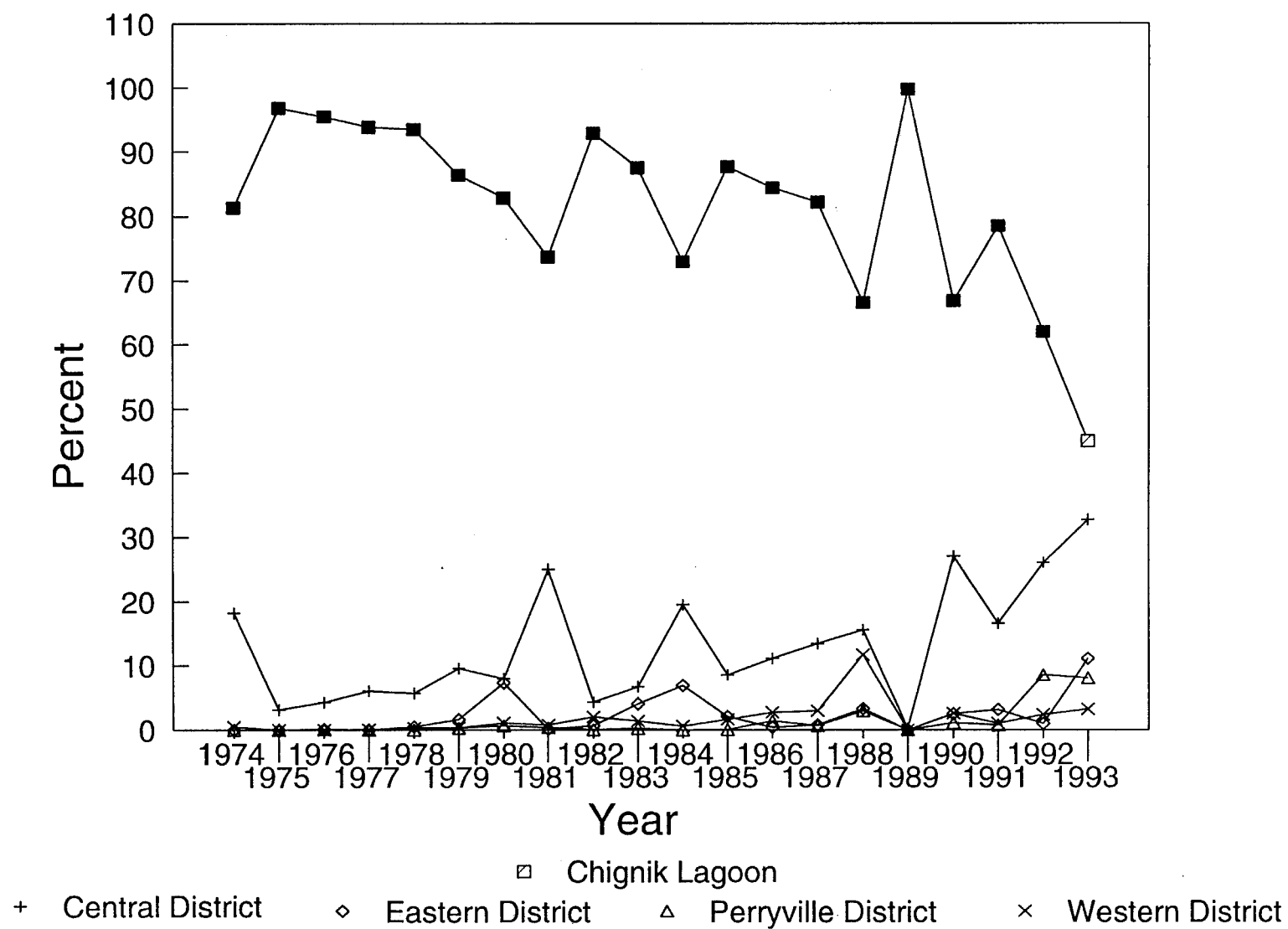
Conclusions: It appears that the sockeye fishery has changed from a fishery primarily conducted in the Chignik Lagoon to a fishery that is prosecuted primarily in Chignik Lagoon and Central District with minor increases in the other districts.



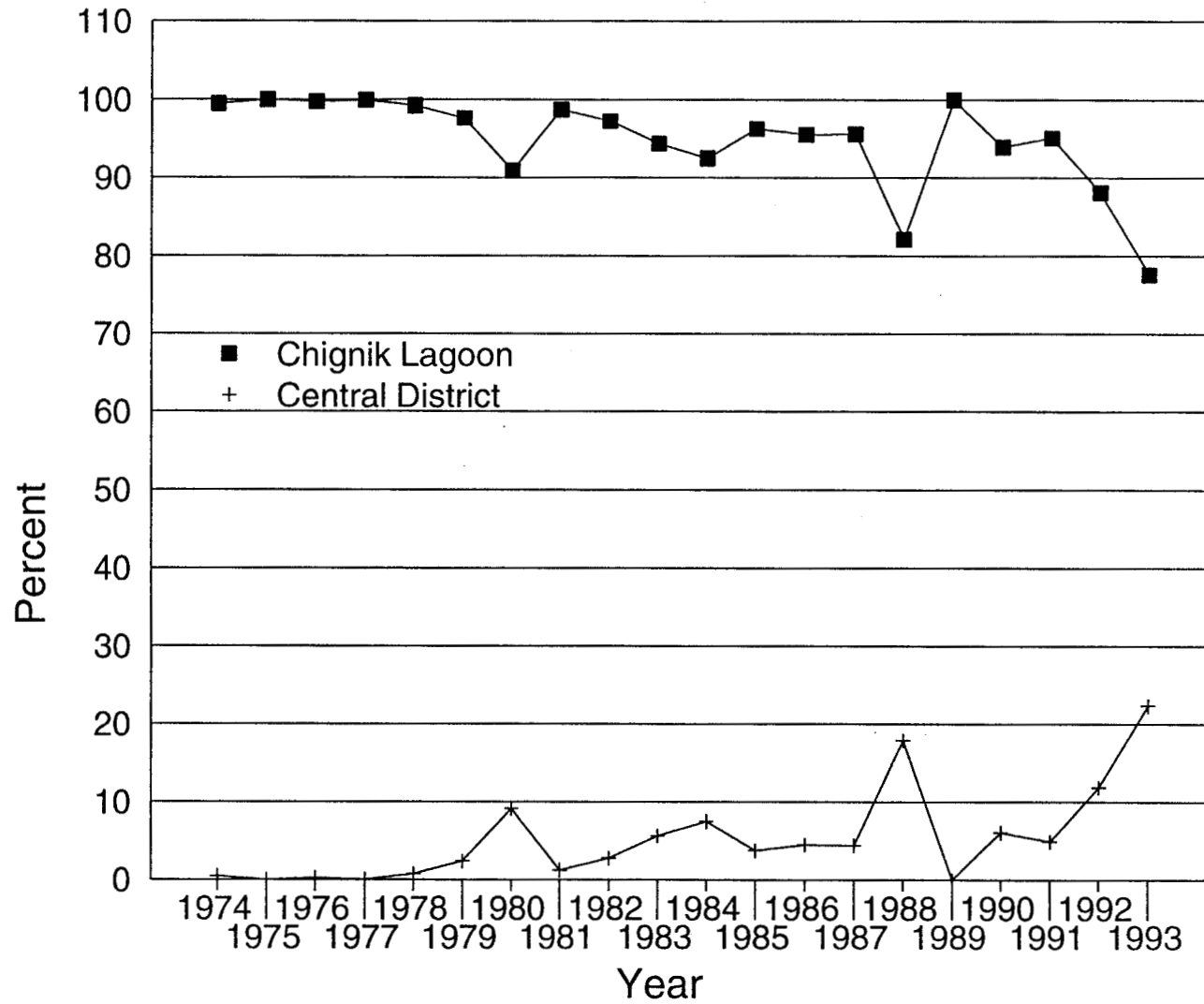
Appendix I.1. Percent of the total Chignik sockeye harvest caught in Chignik Lagoon, 1974-1993.



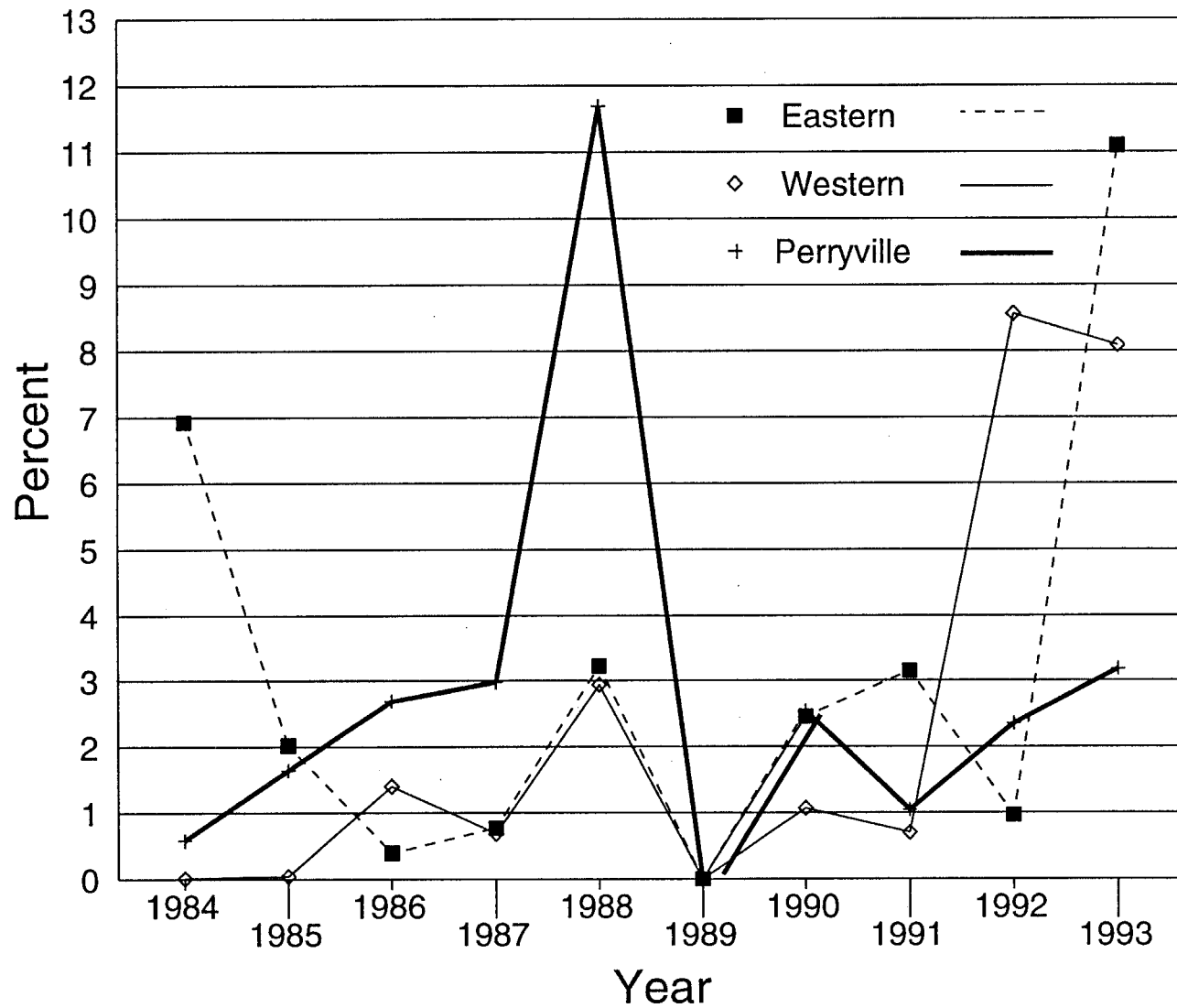
Appendix I.2. Percent increase from the previous year of outside Districts sockeye catches using 1975 as the baseline year.



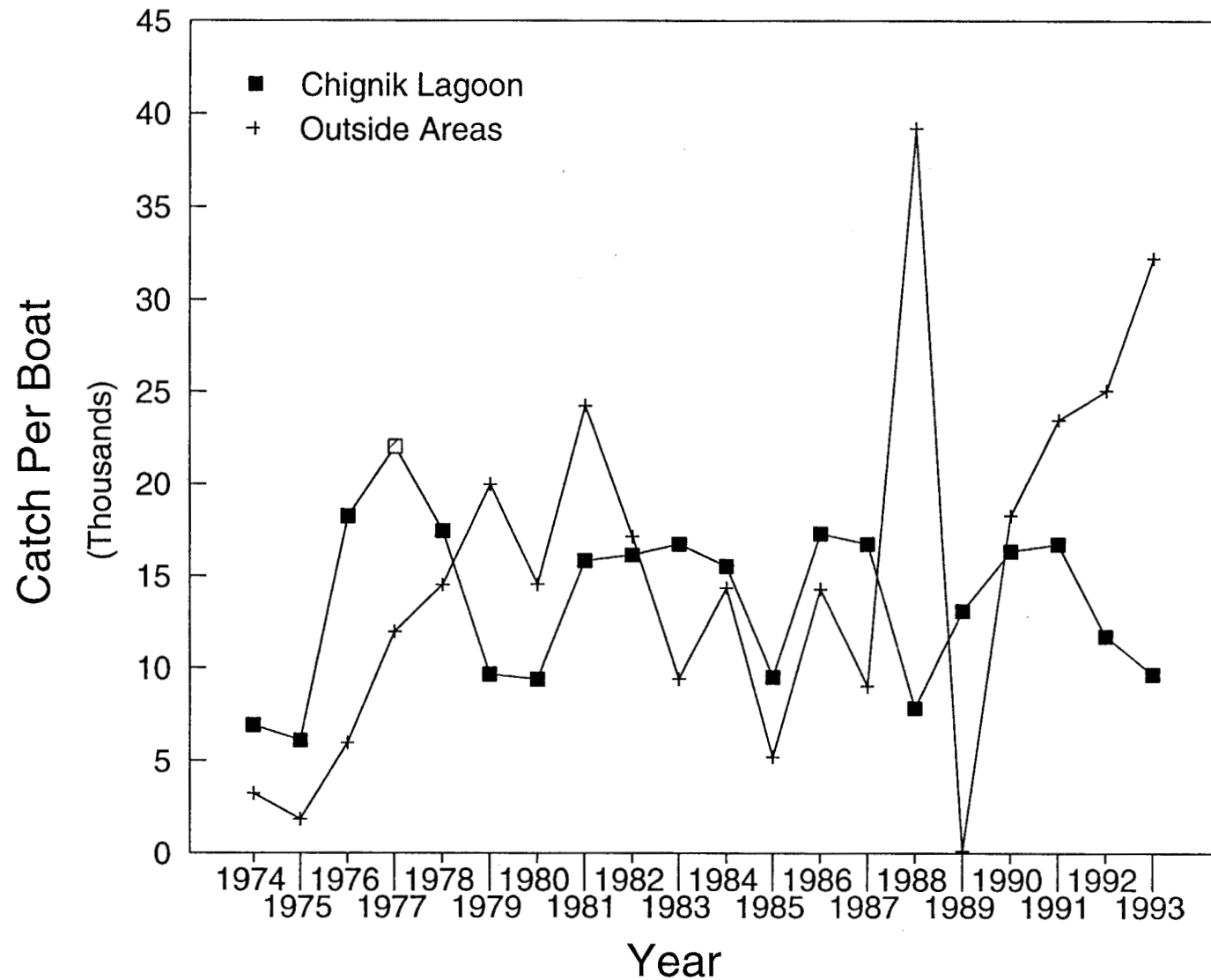
Appendix I.3. Percent of the total Chignik sockeye harvest caught by District, 1974-1993.



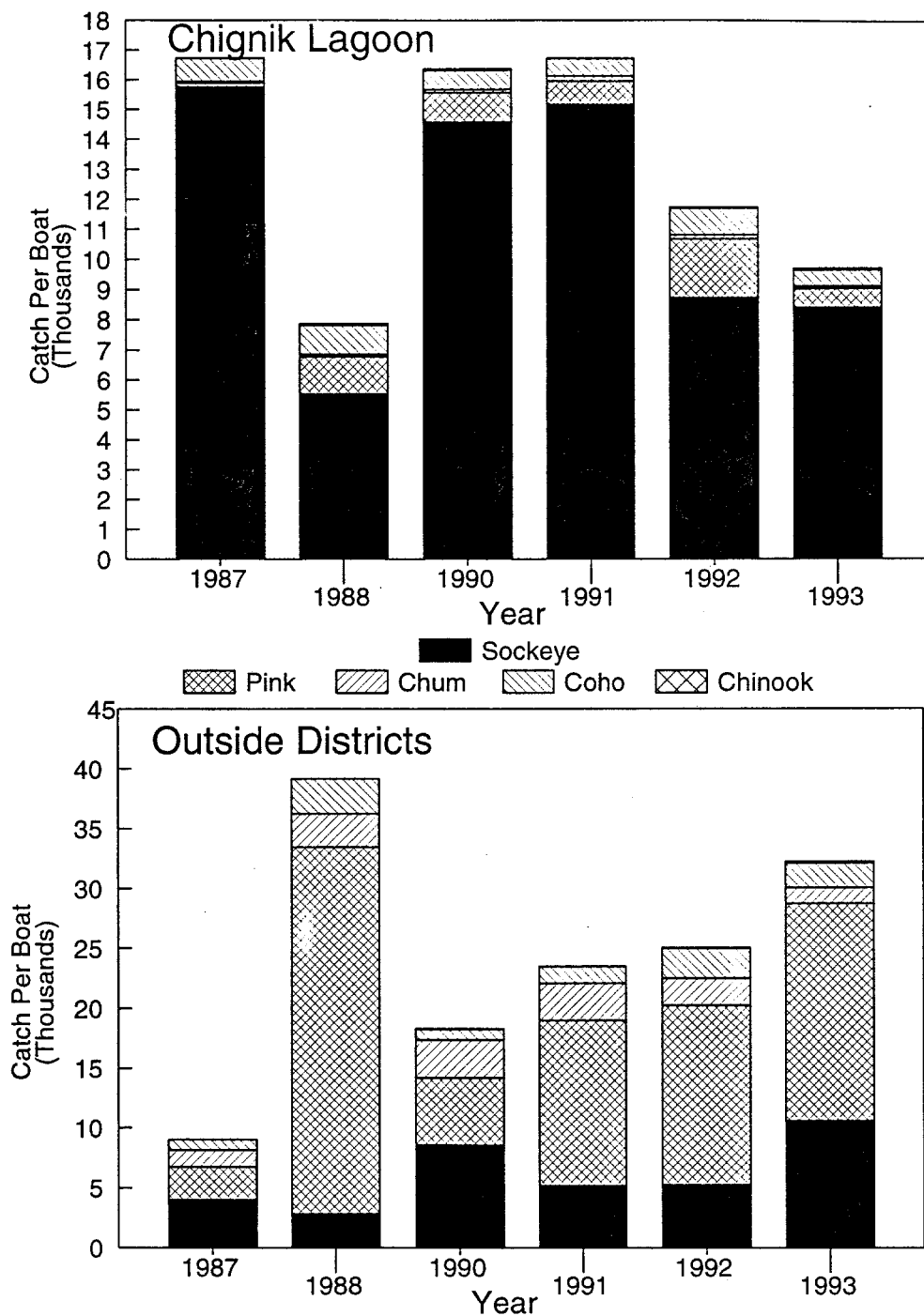
Appendix I.4. Percent of the total Chignik sockeye harvest caught in Chignik and Central Districts versus that caught in all other Districts.



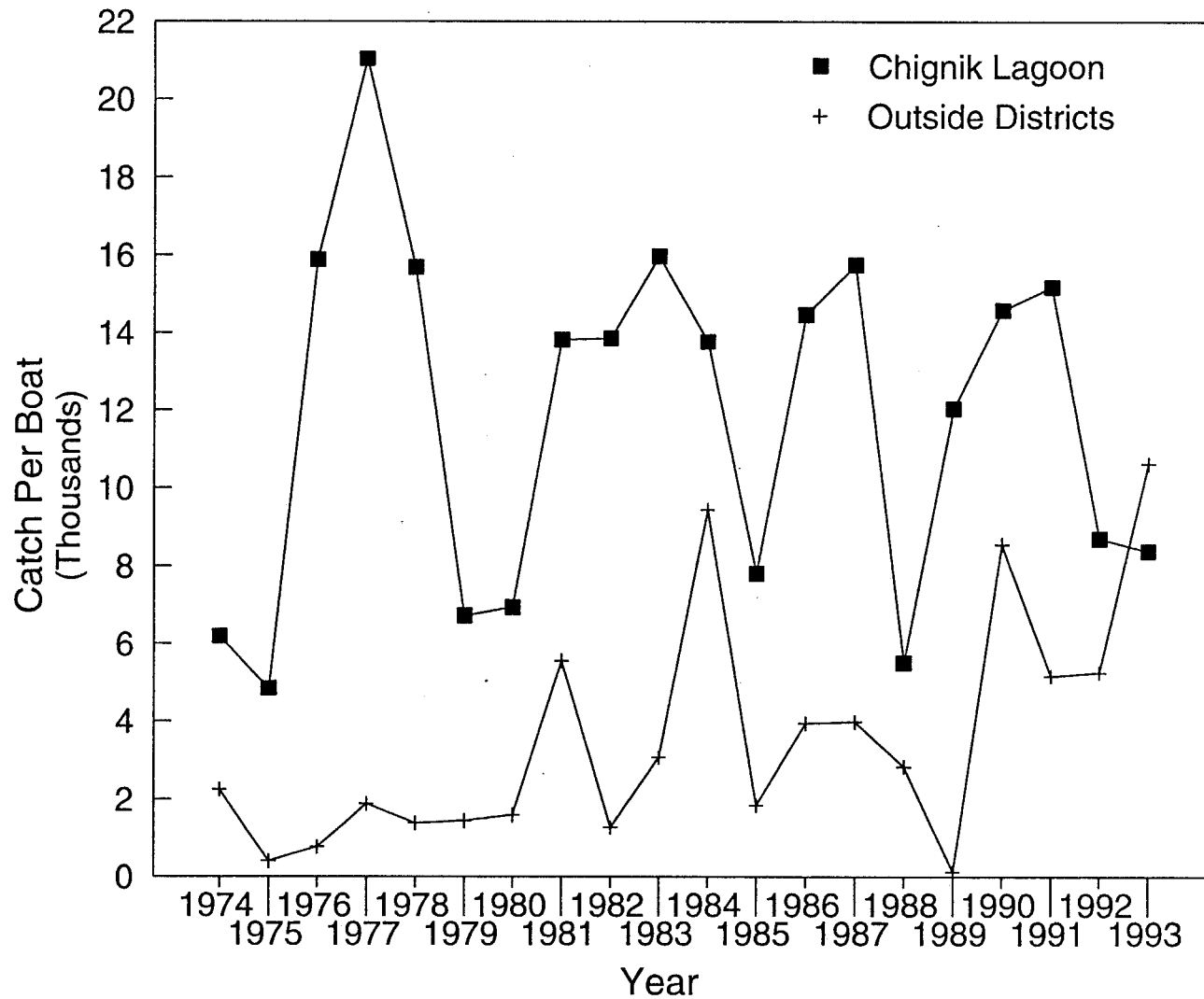
Appendix I.5. Percent of the total Chignik sockeye harvest caught in Eastern, Western, and Perryville Districts.



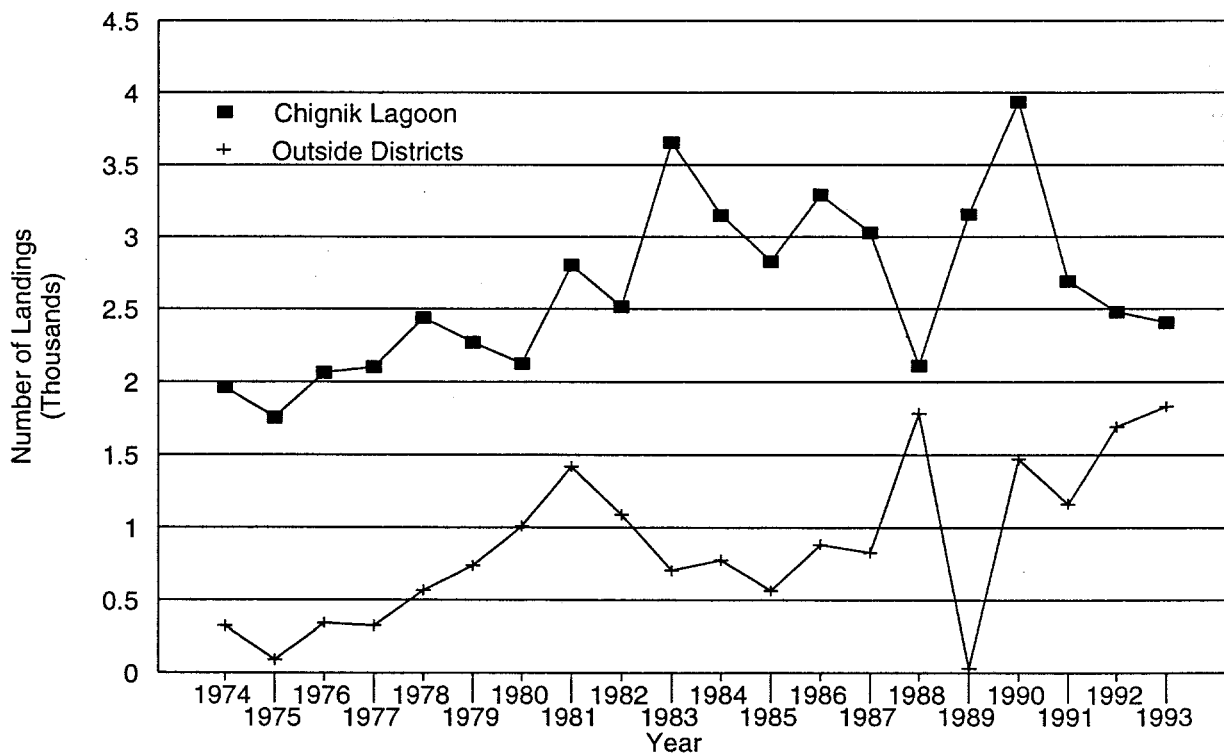
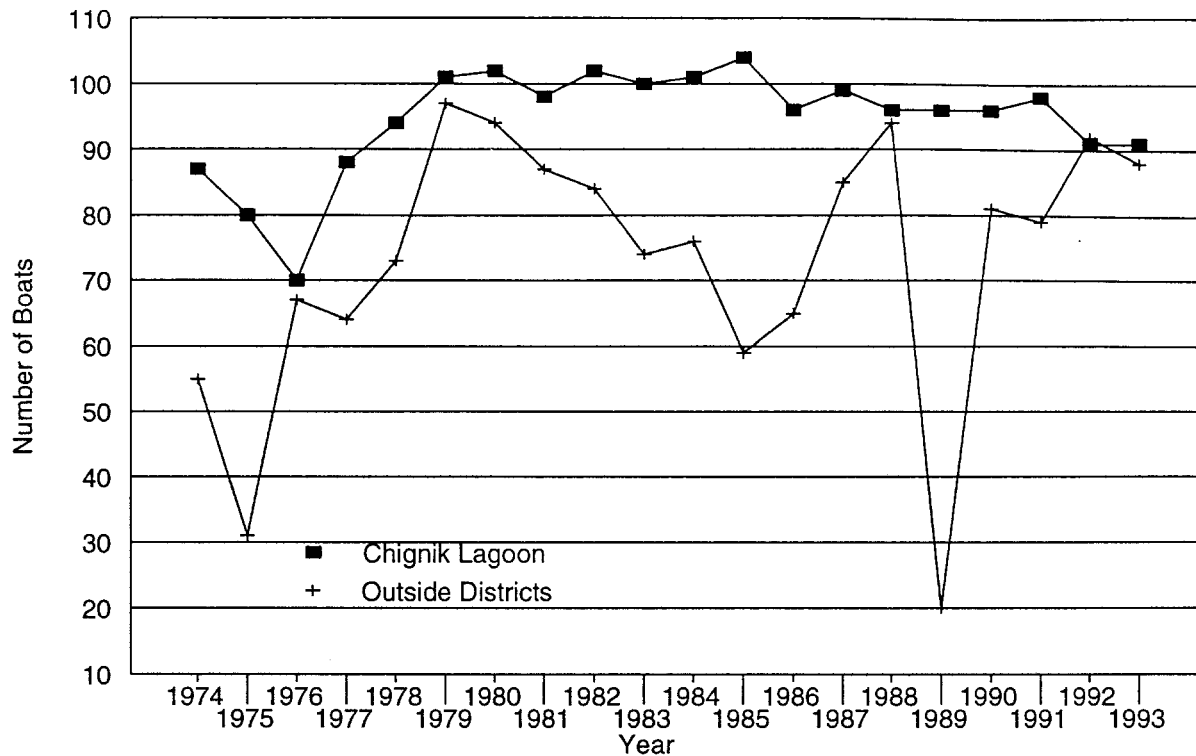
Appendix I.6. Catch per boat for all salmon species caught in the Chignik Management Area, 1974-1993.



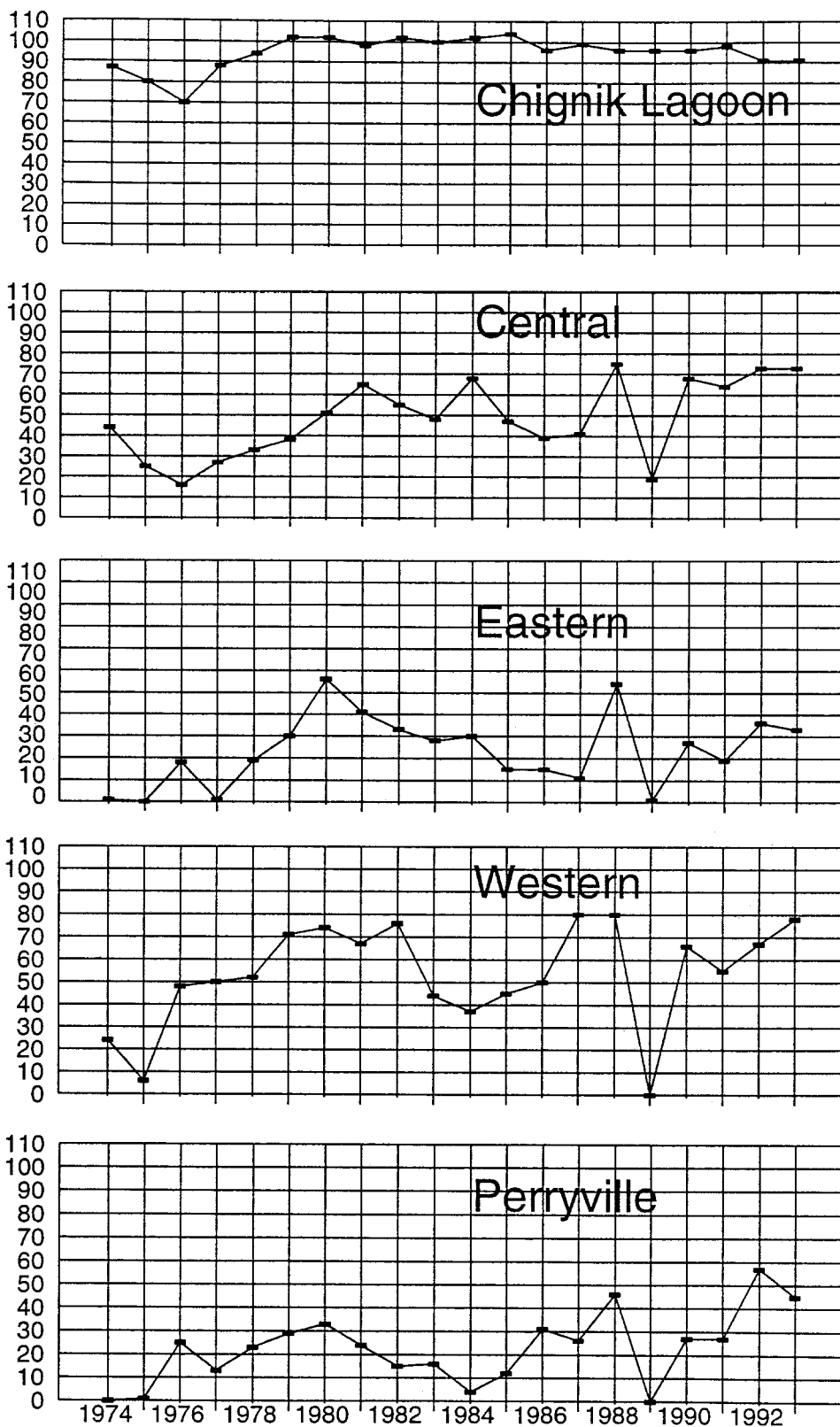
Appendix I.7. Comparison of catch per boat for all species caught in Chignik Lagoon compared to outside districts.



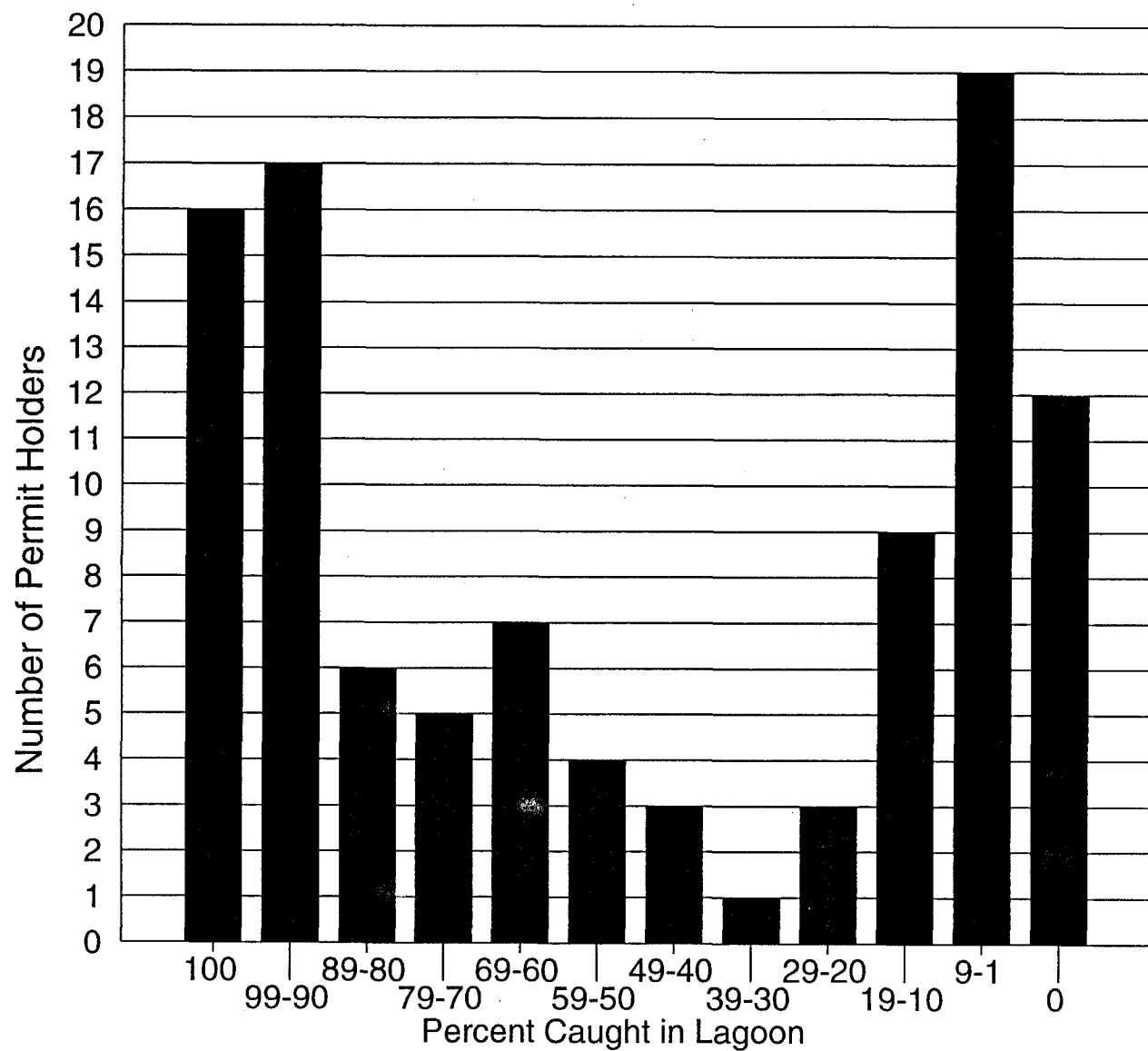
Appendix I.8. Catch per boat for sockeye salmon caught in the Chignik Management Area, 1974-1993.



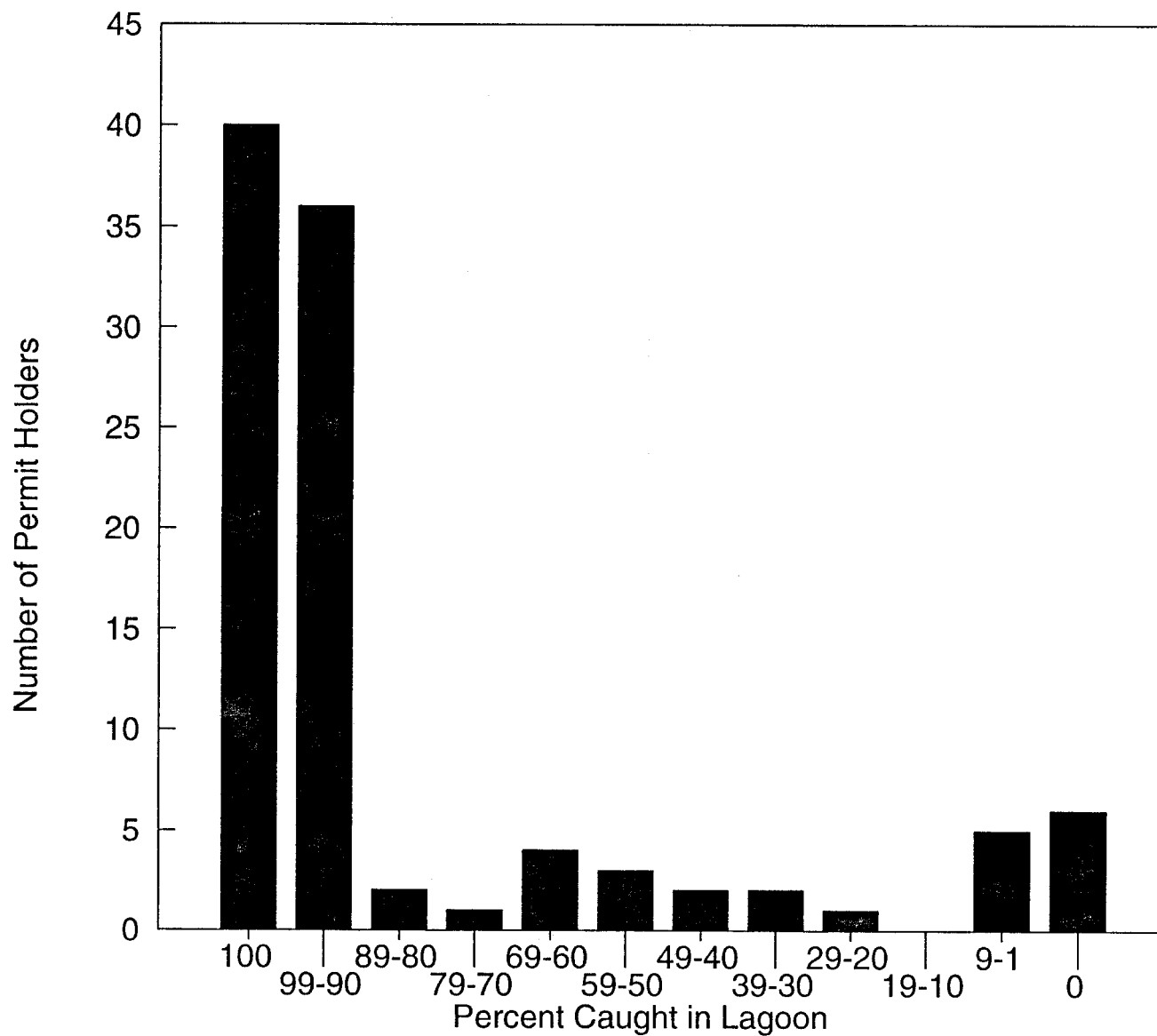
Appendix I.9. Number of permits and landings for Chignik Lagoon compared to outside districts, 1974 - 1993.



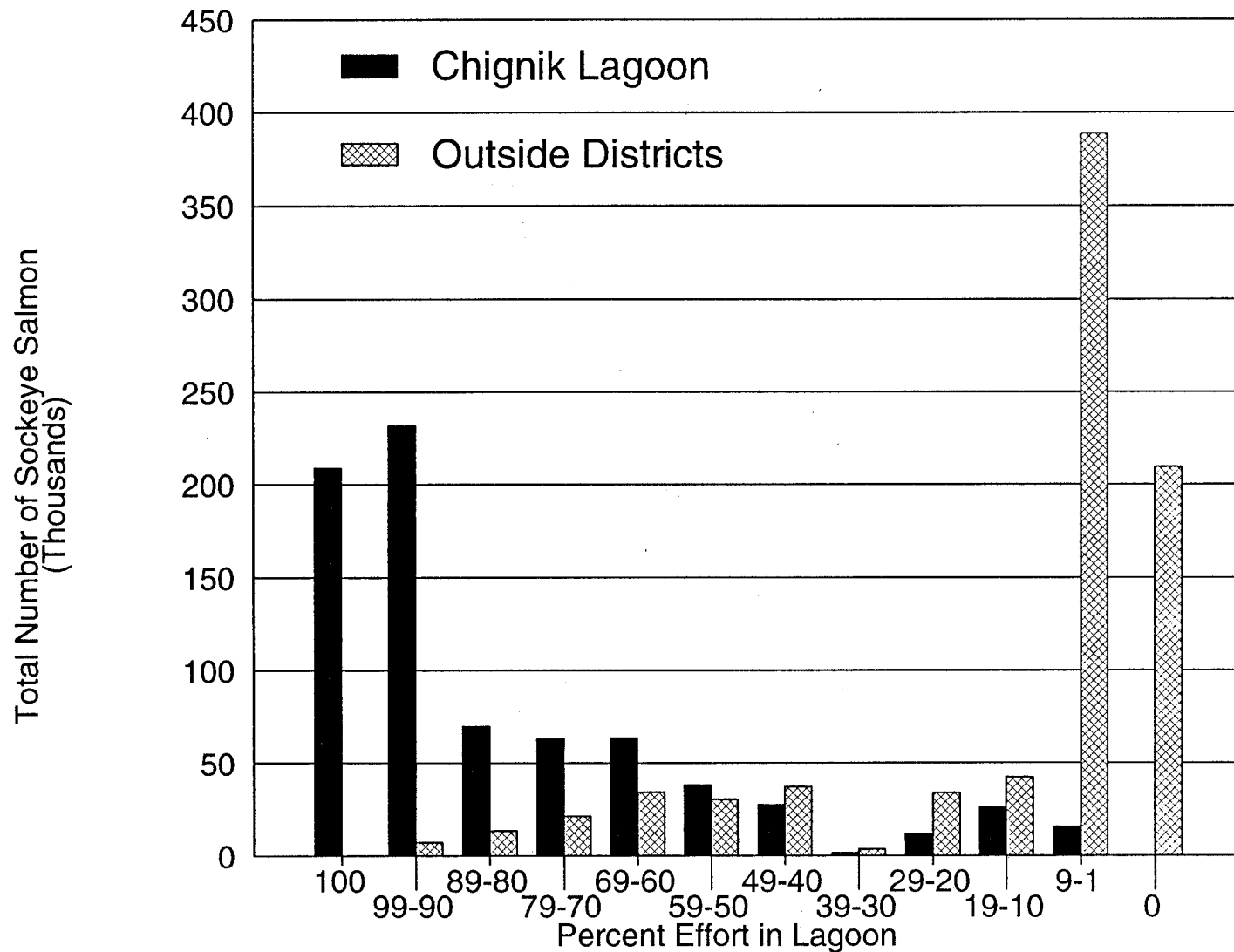
Appendix I.10. Number of boats fished in each District, 1974-1993.



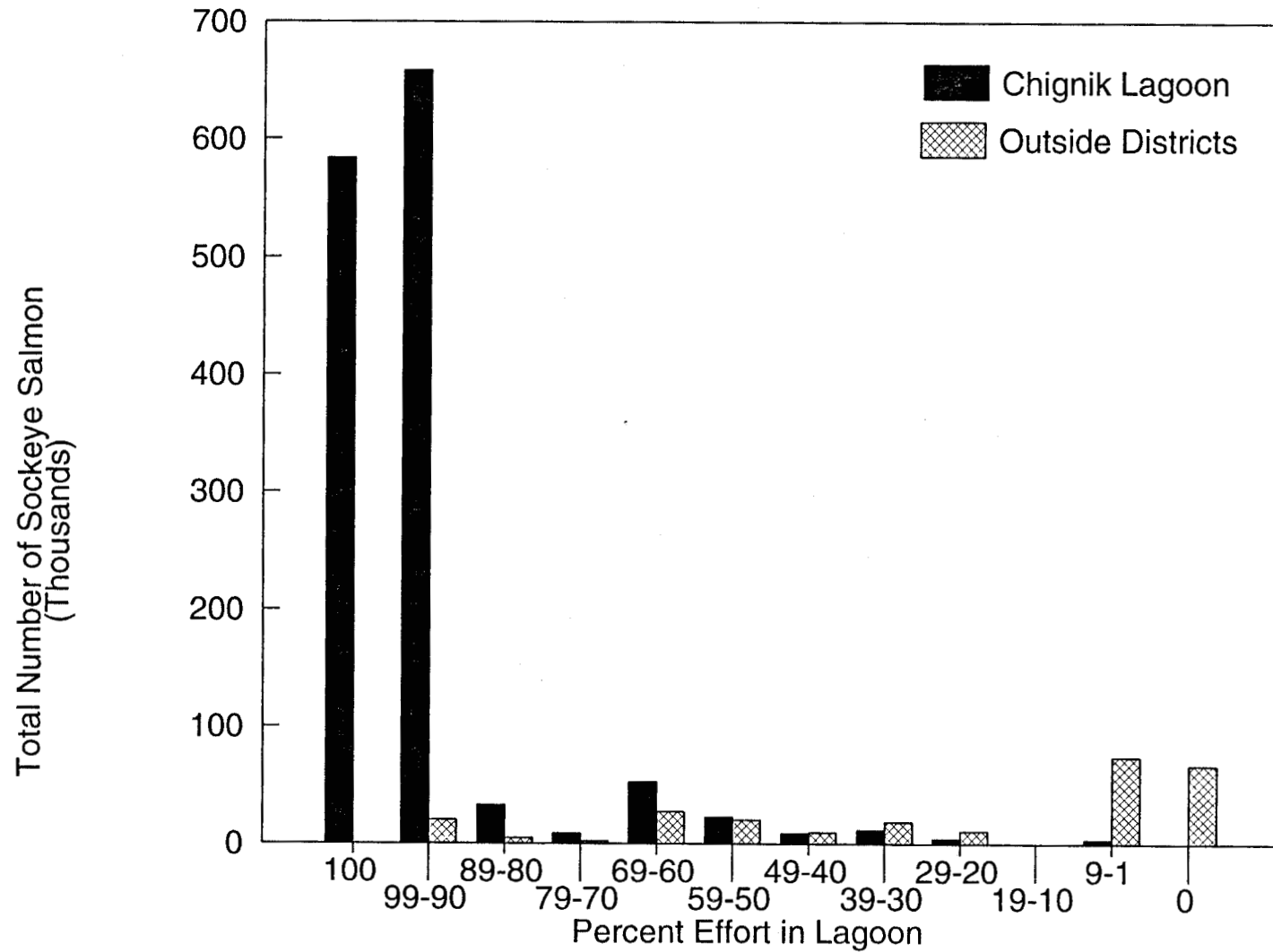
Appendix I.11 Number of permit holders and the percentage of their sockeye (by grouping) harvested in the Chignik Lagoon, 1993.



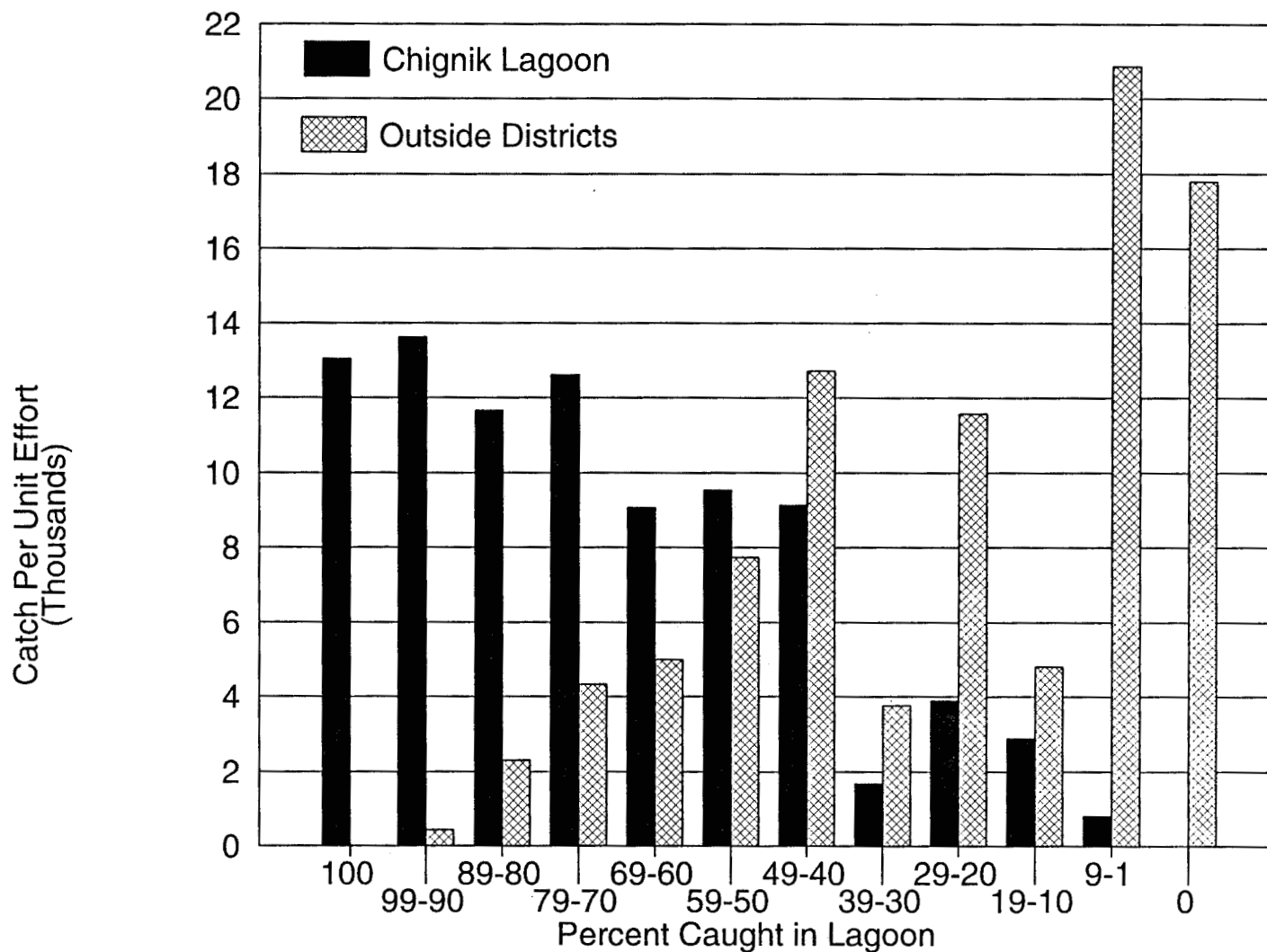
Appendix I.12. Number of permit holders and the percentage of their catches (by grouping) harvested in the Chignik Lagoon, 1986.



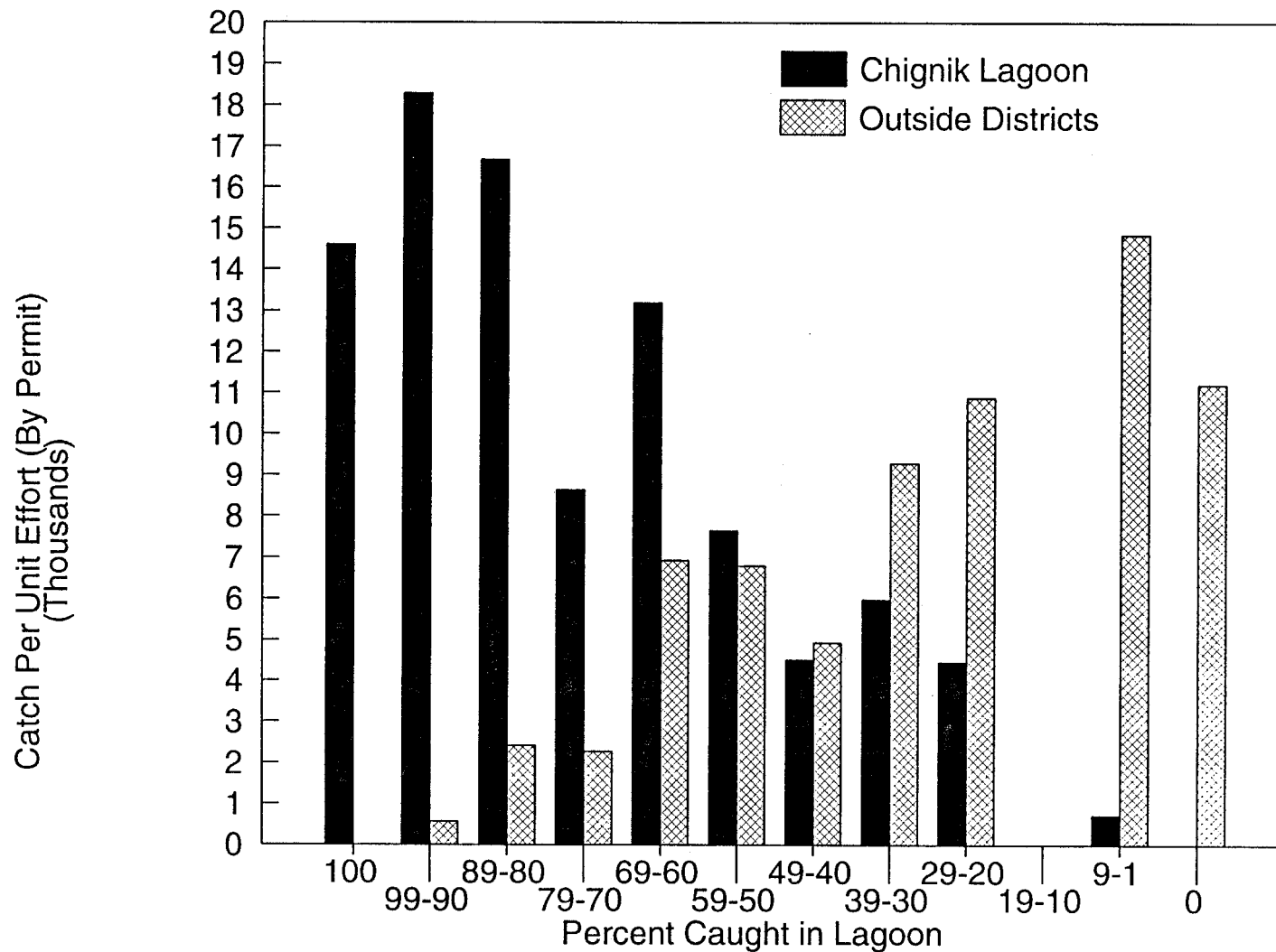
Appendix I.13. The total number of sockeye salmon caught when permit holders are grouped by percentage of effort in Chignik Lagoon as compared to outside Districts, 1993.



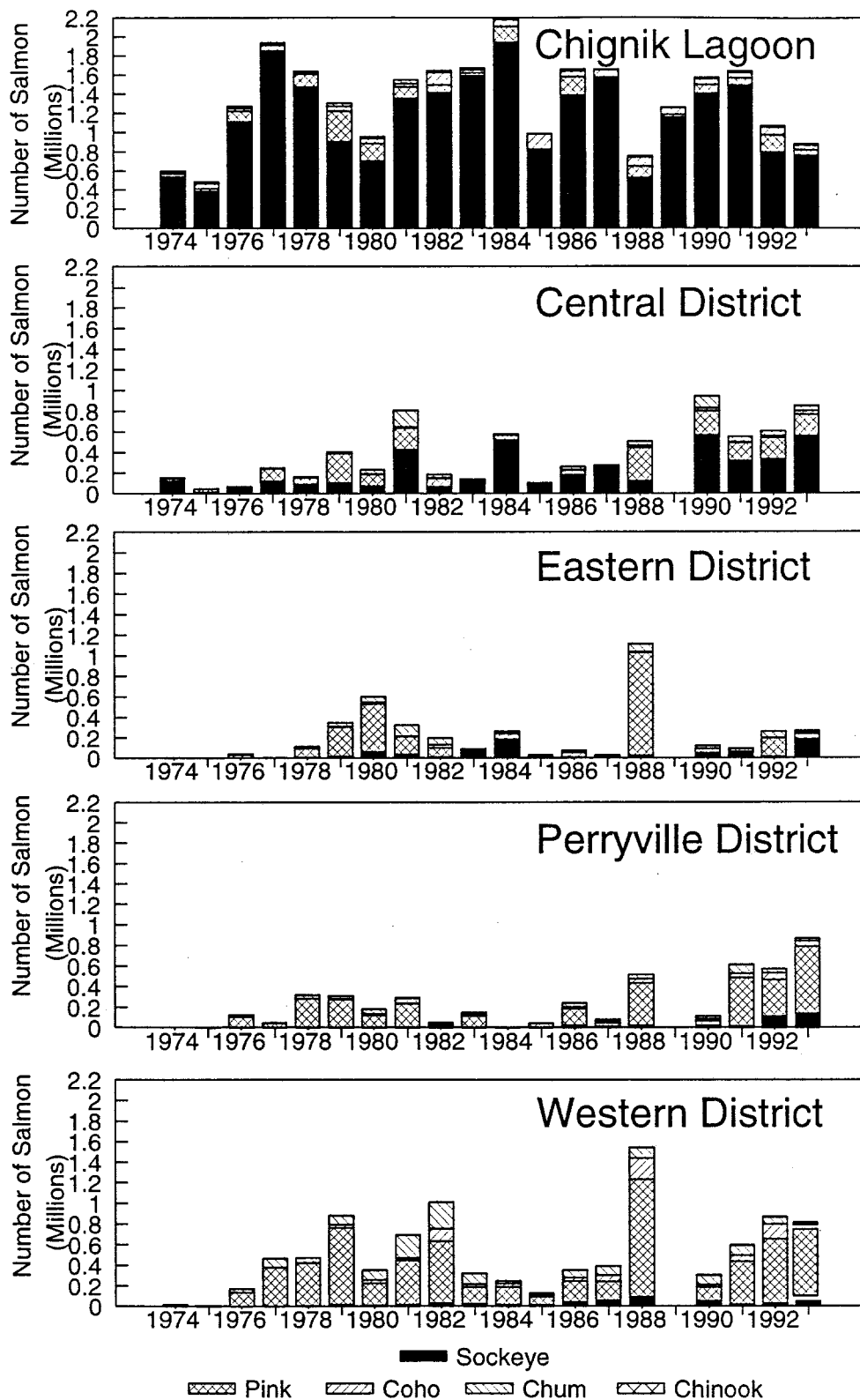
Appendix I.14. The percentage of effort and total sockeye salmon caught when grouping permit holders by effort in Chignik Lagoon as compared to outside Districts, 1986.



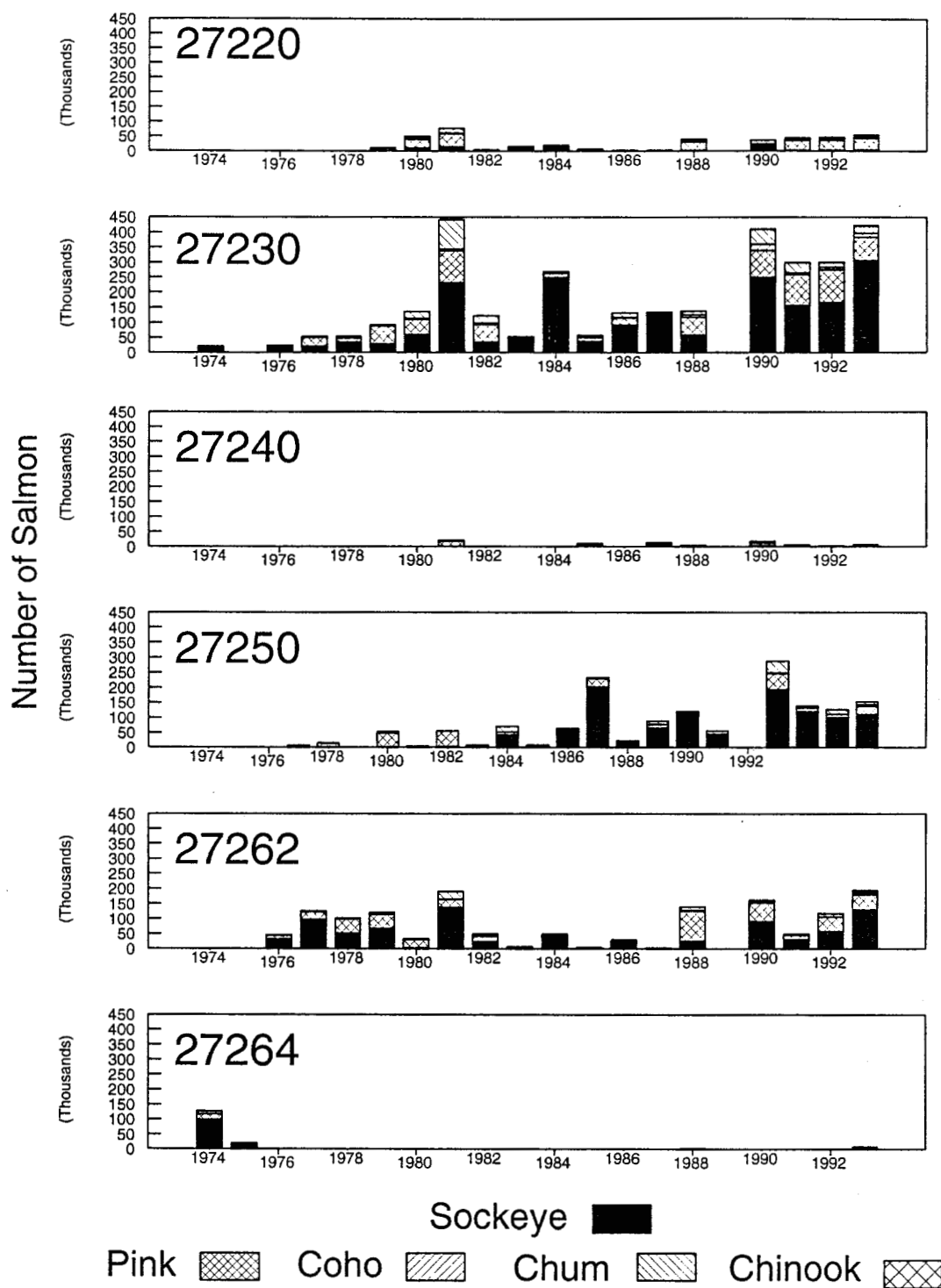
Appendix I.15. Catch per unit effort for sockeye salmon by percentage grouping (percent of the total sockeye effort within the Lagoon) for the Chignik Lagoon versus outside Districts, 1993.



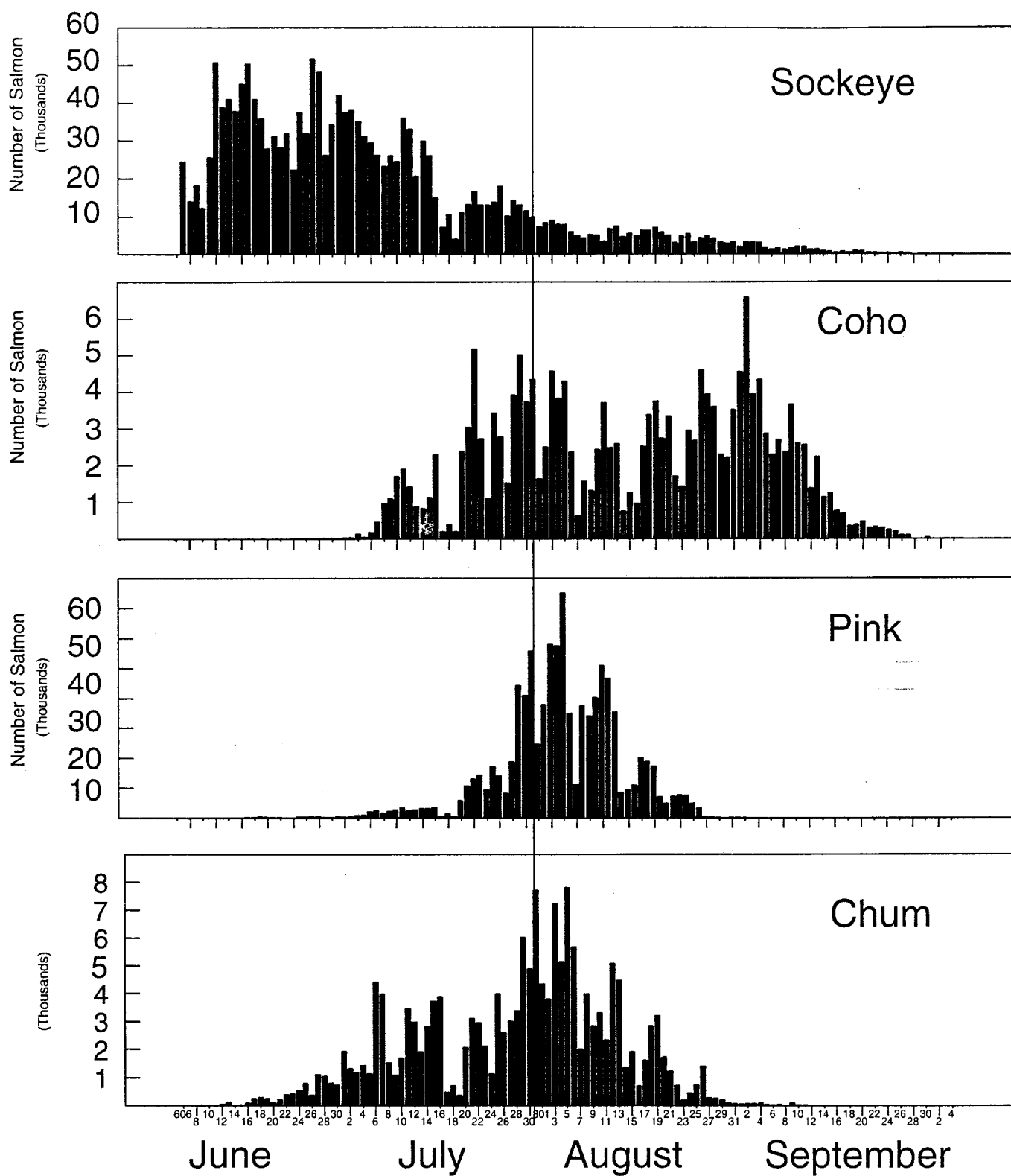
Appendix I.16. Catch per unit effort for sockeye salmon by percentage grouping (percent of the total sockeye effort within the Lagoon) for the Chignik Lagoon versus outside Districts, 1986.



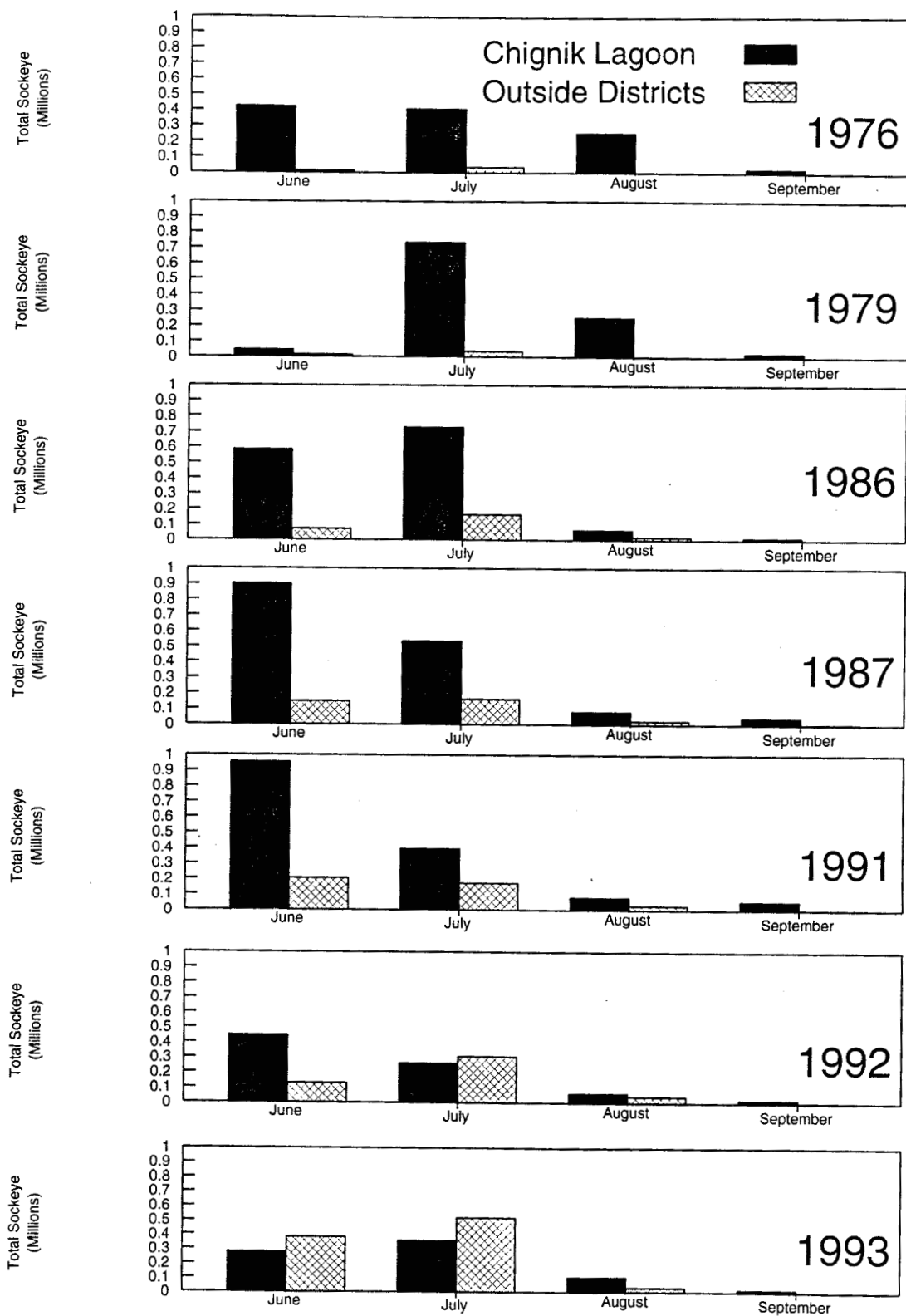
Appendix I.17. Chignik Management Area harvest of salmon by District, 1974 - 1993.



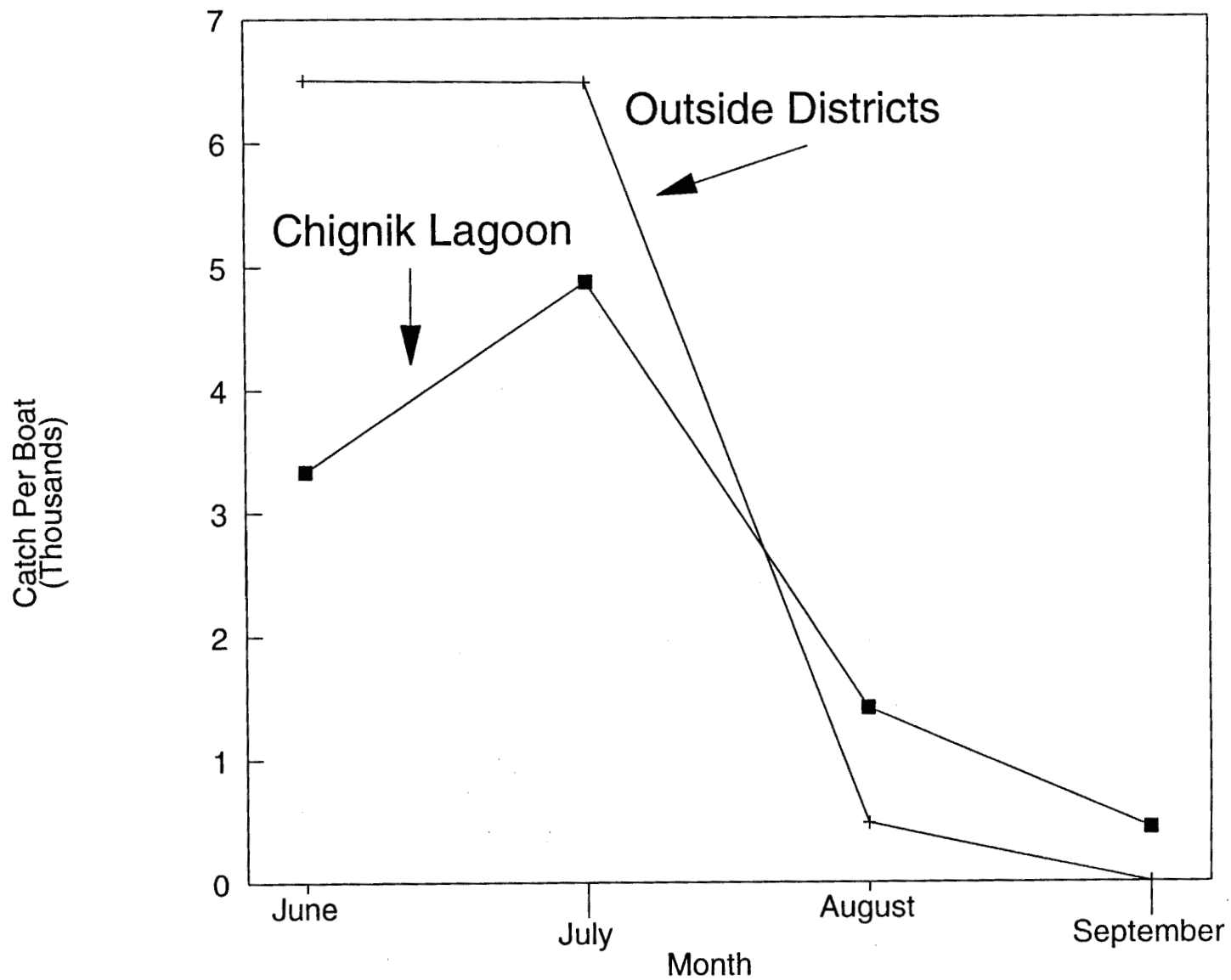
Appendix I.18. Chignik Management Area harvest of salmon in the Central District, 1974-1993.



Appendix I.19. Average catch by day in the Chignik Management Area (thousands of salmon), 1983-93.



Appendix I.20. Total sockeye salmon caught by month for Chignik Lagoon and Outside Districts, 1976 to 1993.



Appendix I.21. Catch per boat for sockeye salmon caught by month in the Chignik Management Area, 1993.

CHIGNIK MANAGEMENT AREA
HERRING SAC ROE FISHERY
MANAGEMENT PLAN, 1993

By

Alan Quimby
and
David Owen

Regional Information Report¹ No. 4K93-4

Alaska Department of Fish and Game
Division of Commercial Fisheries
211 Mission Road
Kodiak, AK 99615

March 1993

¹The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished division reports. These reports frequently serve diverse ad hoc informational purposes or archive basic uninterpreted data. To accommodate timely reporting of recently collected information, reports in this series undergo only limited internal review and may contain preliminary data; this information may be subsequently finalized and published in the formal literature. Consequently, these reports should not be cited without prior approval of the author or the Division of Commercial Fisheries.

ACKNOWLEDGEMENT

Critical review of this manuscript by Bob Murphy, Jim McCullough and Arnie Shaul is greatly appreciated. The authors wish to express their appreciation to Lucinda Neel for her direction and technical support.

TABLE OF CONTENTS

| | <u>Page</u> |
|--|-------------|
| LIST OF TABLES | i |
| LIST OF FIGURES | i |
| INTRODUCTION | 1 |
| Description of Area | 1 |
| History of the Herring Fishery | 1 |
| Management Strategy Sac Roe Fishery | 1 |
| CHIGNIK AREA HERRING MANAGEMENT PLAN | 2 |
| Registration Requirements | 2 |
| Tenders and Processors | 2 |
| Fishing Vessels | 2 |
| Regulations in Effect | 2 |
| Guideline Harvest Level | 2 |
| Fishing Season | 3 |
| Fishing Periods | 3 |
| Airplanes | 3 |
| Legal Herring Gear | 3 |
| Tender and Processors Reporting Requirements | 3 |
| 1993 Management Strategy | 4 |

LIST OF TABLES

| <u>Table</u> | <u>Page</u> |
|---|-------------|
| 1. Guideline harvest levels for the Chignik Management Area, 1993 | 5 |

LIST OF FIGURES

| <u>Figure</u> | <u>Page</u> |
|--|-------------|
| 1. Map of the Alaska Peninsula illustrating the relative location of the Chignik Management Area | 6 |
| 2. Map of the Chignik Management Area with the statistical fishing districts and some prominent locations identified | 7 |
| 3. Chignik Management Area herring harvests, 1980-1992 | 8 |

INTRODUCTION

Description of Area

The Chignik Management Area lies on the south side of the Alaska Peninsula between the Kodiak Management Area to the east and the Alaska Peninsula-Aleutian Islands Management Area to the west (Figure 1). Kilokak Rocks is the eastern boundary and Kupreanof Point is the western boundary. The area is subdivided into the Eastern, Central, Chignik Bay, Western and Perryville Districts (Figure 2).

History of the Herring Fishery

At the inception of the Alaska Peninsula herring fishery, Chignik area catches were grouped with catches from north and south peninsula areas and labeled as Southwestern Alaska catches. The earliest recorded commercial herring fishery occurred in 1906. Annual Southwestern Alaska herring catches for the early 1900s did not exceed 500 tons. A small herring saltery was operated at Lake Bay in the Chignik Bay District during the early 1930s. Herring were harvested with beach seines and salted for future resale. No further breakdown of catch by area is available. The herring fisheries ceased in the late 1930s and did not commence again until 1980, when the sac roe fishery was initiated.

The herring sac roe fishery in the Chignik Area began in 1980. Although the current sac roe fishery may not be fully developed, exploration and effort levels suggest that it will continue to be a relatively low participation and low yield fishery.

Management Strategy Sac Roe Fishery

Several geographic areas support the majority of Chignik's spawning biomass; and the herring in each of these areas are managed as discrete stocks.

The annual harvest for each identified stock is dependent upon previous year biomass estimates and an exploitation rate of 0-20% of the available spawning biomass. The annual level of exploitation is dependent on evaluation of individual stock status, recruitment, and age composition. By regulation, the herring sac roe season extends from 15 April through 30 June. Inseason management stipulates alternating 24 hour fishing periods, and 24 hour closures. Each fishing period will begin at 1200 hours (12:00 noon) on odd numbered days throughout the regulatory season and close at 1200 hours (12:00 noon) on even numbered days or when the harvest level for an individual stock is achieved. Preseason harvest projections may differ from actual harvest levels if inseason information suggests the spawning biomass of discrete stocks differ significantly from anticipated levels.

The fishery is monitored through contact with fishermen and aerial observations of the herring biomass, as well as daily contact with local processors.

An important element in the management of the Chignik herring fishery comes from information collected by fishermen and commercial spotters regarding biomass estimates, location of herring, spawning areas, etc.. This cooperation is definitely encouraged and all exchange of information will be confidential.

CHIGNIK AREA HERRING MANAGEMENT PLAN, 1993

Registration Requirements

Tenders and Processors

Each tender operator and buyer must register in person with the Alaska Department of Fish and Game (ADF&G) and obtain a registration packet containing statistical charts, etc. in Kodiak or Chignik prior to fishing (regulation 5 AAC 27.540).

Fishing Vessels

There is no area registration requirements for fishing vessels in 1993.

Regulations in Effect

Refer to the 1992 Commercial Herring Regulation Booklet.

5 AAC 27.590. BUYER AND TENDER REPORTING REQUIREMENTS. In addition to the requirements of 5 AAC 39.130 (f) each tender operator and each buyer or his agents shall report in person to and register with a local representative of ADF&G upon arrival in the statistical area before commencing operations and before changing location of the operation. Each buyer shall: (1) identify all vessels to be employed in transporting or processing herring and shall register such vessels with a local representative of ADF&G located in the statistical area before transporting or processing herring.

Guideline Harvest Level

The Statewide harvest policy of harvest on a 0-20% exploitation rate of the available spawning biomass will be followed.

Harvest levels will be determined inseason on a bay or stock basis. The commercial herring harvest from the Chignik Area has been declining since 1980 (Figure 3). The harvest range for the past thirteen seasons has been 0 to 694 tons with an average of 54 tons (Table 1). Based on past years interest and effort, the harvest in 1993 will be between 10 and 30 tons.

The actual 1993 harvest will depend upon the biological condition of the stock, the amount of effort actively exploring the area, and the availability of local processing. However, it is not expected that the 1993 harvest will reach the thirteen year average harvest of 54 tons.

Fishing Season

Herring may be taken from 15 April through 30 June.

Herring may be taken only during periods established by emergency order.

Fishing Periods

Initially, fishing periods will be 24 hours long beginning at 1200 hours (12:00 noon) on all odd numbered days and ending at 1200 hours (12:00 noon) on all even numbered days. The schedule will begin at 1200 hours (12:00 noon) 15 April. Any changes in this fishing schedule will be announced by emergency order.

Airplanes

There is no restriction on the use of airplanes in the sac roe herring fishery.

Legal Herring Gear

5 AAC 27.565. (a) Herring may be taken only by purse seines.

5 AAC 27.575. **SEINE SPECIFICATIONS AND OPERATIONS.** No purse seine may be more than 1,000 meshes in depth or more than 100 fathoms in length.

Tender and Processors Reporting Requirements

All processors and tender operators will be required to report daily catch information to ADF&G. This can be accomplished either by radio (SSB) or telephone.

The Chignik ADF&G office will stand by on 4125 SSB and VHF CH6 frequencies, between 0800 hours - 1000 hours (8:00 -10:00 A.M.) and 2000 hours to 2200 hours (8:00 P.M. - 10:00 P.M.). The call sign for Chignik is **KGB 76 "Chignik Weir"**, telephone number 845-2243, FAX number 845-2235. If unable to contact ADF&G Chignik, your catch information should be given to ADF&G Kodiak or Cold Bay via telephone or 4125 SSB. The call signs for Kodiak and Cold Bay are WHM 29 and WHW 906, respectively. Failure to report is a violation of commercial fishing regulations (5 AAC 27.590 (2)); vigorous enforcement of this regulation should be expected as a result of past harvest reporting deficiencies.

Because of the relatively small guideline harvest levels for some bays and districts, the fishing season will be promptly closed by emergency order whenever it appears that accurate catch information cannot quickly be obtained from the processors and tenders by radio or telephone. Prompt reporting will increase the likelihood of reopening certain areas if the summarized catches indicate that the desired guideline harvest levels have not been reached in a certain bay or district and if there are sufficient numbers of herring present in the bay to warrant a reopening.

For Confidential Purposes:

Individual code sheets will be given to each tender/processor for the purpose of reporting catch (tons) and statistical area where herring were caught.

1993 Management Strategy

The 1993 Chignik herring management plan will incorporate some of the data collected during the 1980-1992 seasons. Harvest levels are established only in those bays where historical biomass estimates and fishing effort dictate.

The Big River Section has not received any appreciable recruitment of herring since 1980.

The trend in this stock's age composition has regressed from a healthy 1980 biomass dominated by 4 and 5 year old fish to a diminished biomass in 1986 dominated by 8 and 9 year old fish. No significant recruitment has occurred in recent years. Consequently the Big River Section (272-70 Amber Bay and 272-60 Aniakchak Bay) will remain closed in 1993.

Lake Bay (271-10) in the Chignik Bay District and Castle Bay (273-94) in the Castle Cape Section of the Western District will be very closely monitored in 1993.

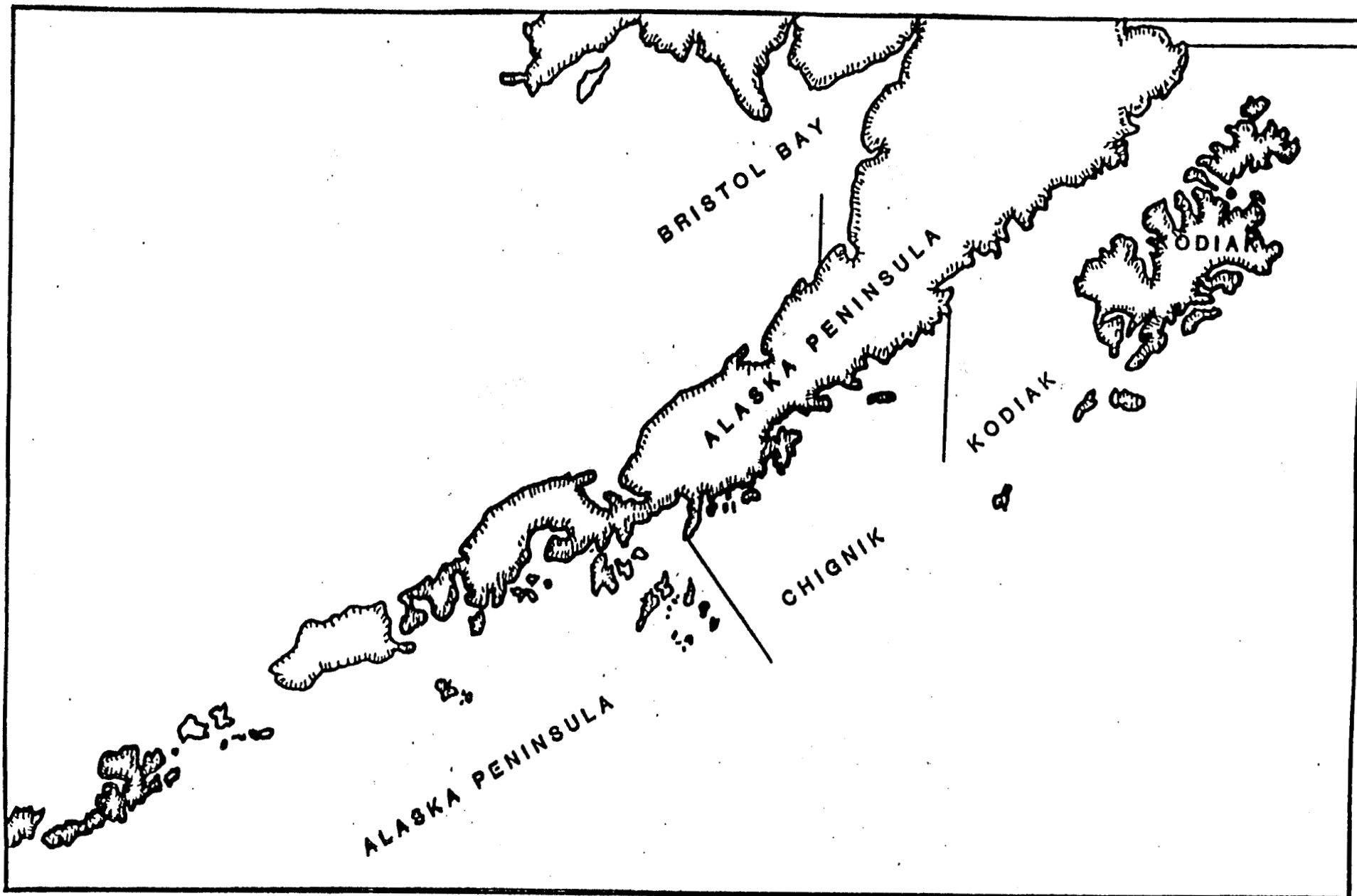
Appendix J. (page 9 of 12)

Table 1. Guideline harvest levels for the Chignik Management Area, 1993^a.

| Stat. Area | Guideline Management Unit | Harvest Levels | Required Spawning Biomass | |
|---------------|------------------------------|---------------------|---------------------------|------------|
| | | | @20% | @10% |
| 272-20 | Amber Bay (Aniakchak Bay) | 0 Tons ^b | 0 Tons | 0 Tons |
| 271-10 | Anchorage Bay | 100 Tons | 500 Tons | 1,000 Tons |
| 273-94 | Castle Bay | 10 Tons | 50 Tons | 100 Tons |
| 271-10 | Chignik Lagoon | 10 Tons | 50 Tons | 100 Tons |
| 272-30 | Hook Bay | 10 Tons | 50 Tons | 100 Tons |
| 275-50 | Humpback Bay | 20 Tons | 100 Tons | 200 Tons |
| 275-40 | Ivanof Bay | 10 Tons | 50 Tons | 100 Tons |
| 272-50 | Kujulik Bay | 10 Tons | 50 Tons | 100 Tons |
| 271-10 | Lake Bay | 10 Tons | 50 Tons | 100 Tons |
| 272-96 | Port Wrangall (Agripina) | 20 Tons | 100 Tons | 200 Tons |
| TOTAL | | 200 Tons | 1,000 Tons | 2,000 Tons |

^a The specific statistical areas listed above are those areas having a historical sac-ro-e harvest. The remainder of the Chignik Management Area is open for exploration and will be regulated within the statewide herring harvest policy of 0% to 20% of the available biomass.

^b The Big River Section (272-70 Amber Bay and 272-60 Aniakchak Bay) will remain closed in 1993.



1. Map of the Alaska Peninsula illustrating the relative location of the Chignik Management Area.

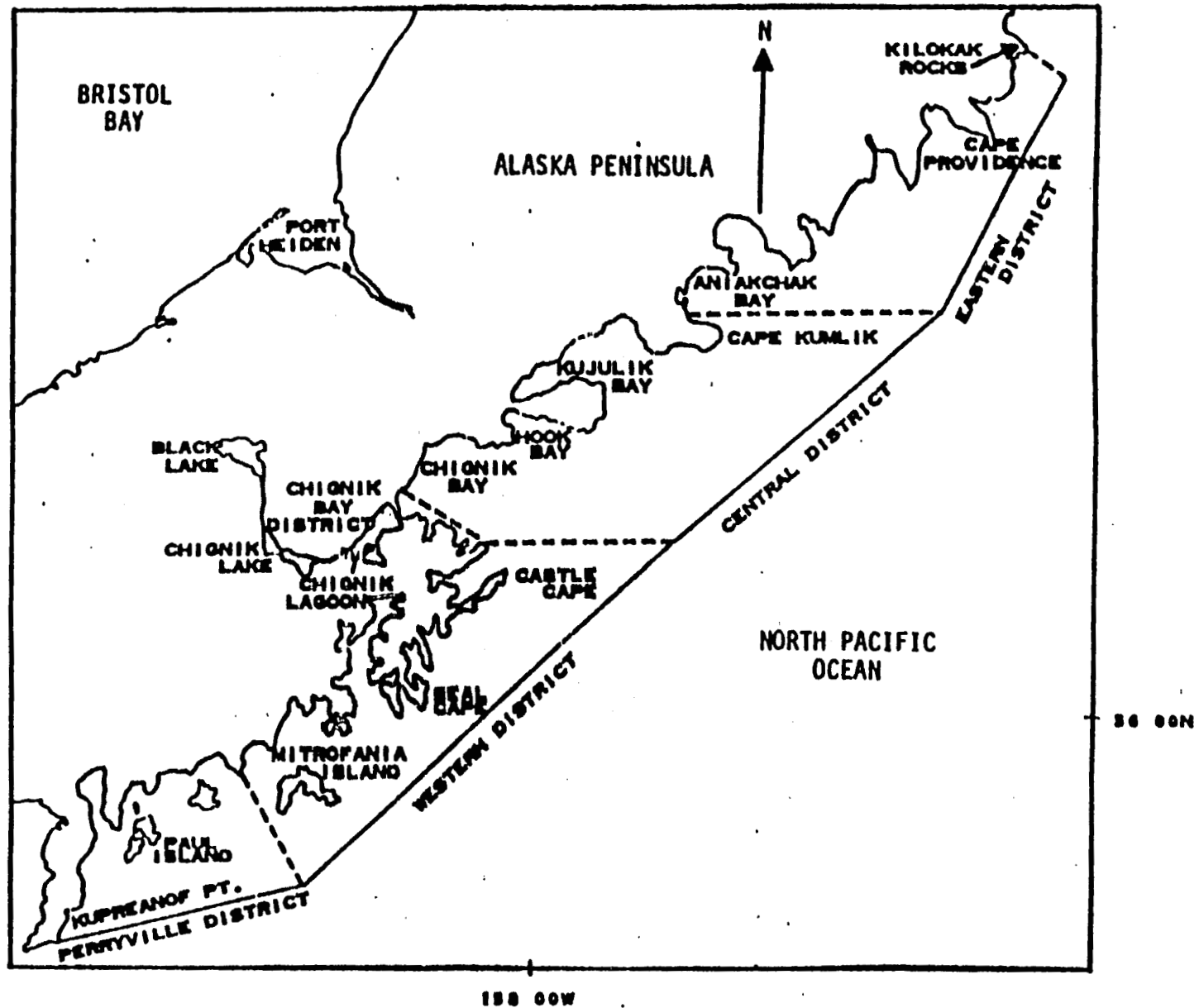


Figure 2. Map of the Chignik Management Area with the statistical fishing districts and some prominent locations identified.

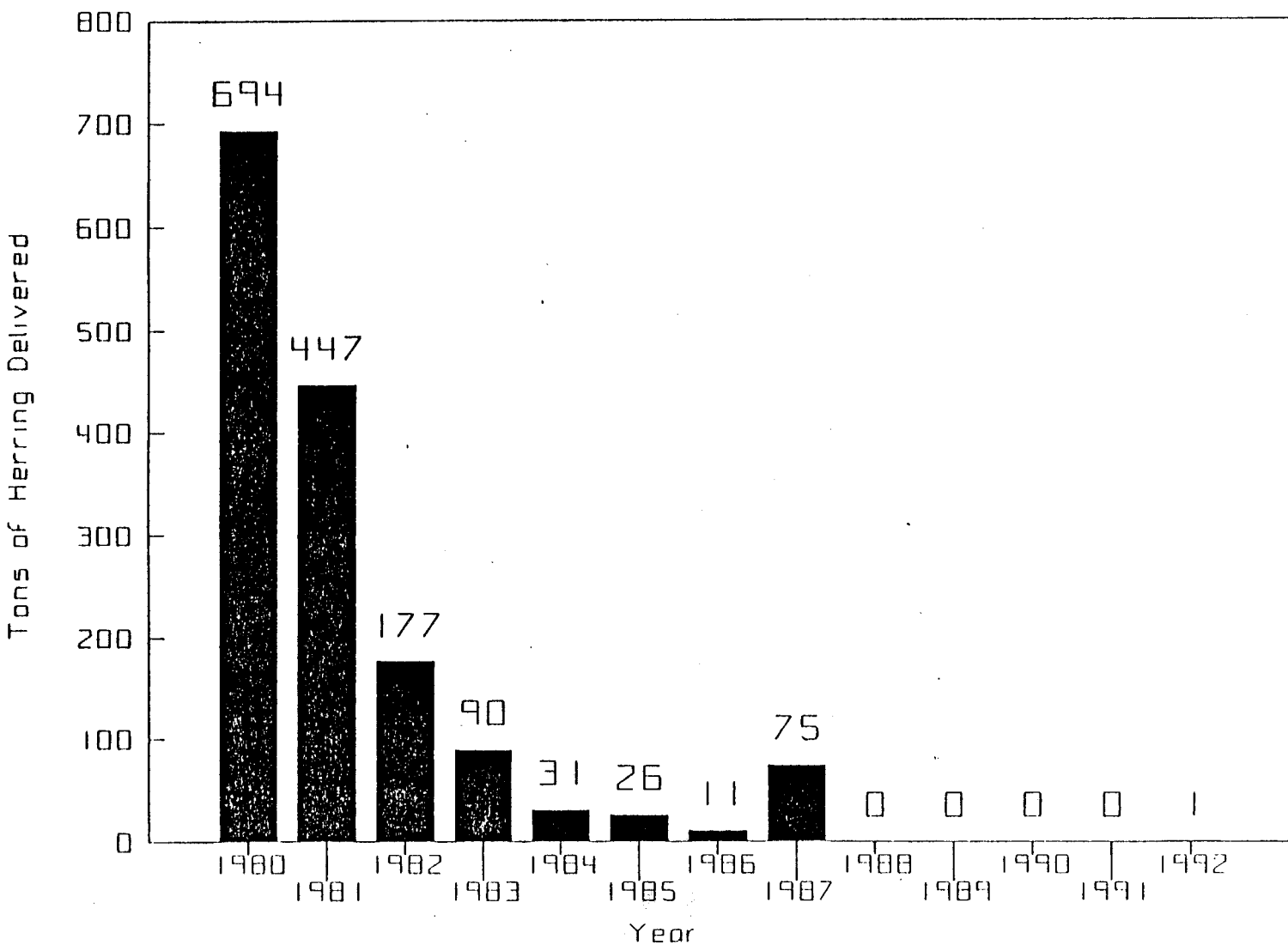


Figure 3. Chignik Management Area herring harvests, 1980 - 1992.

ARTICLE 9. - STATISTICAL AREA L

CHIGNIK AREA.

5 AAC 27.550. DESCRIPTION OF AREA. Statistical Area L includes all waters on the south side of the Alaska Peninsula enclosed by 156°20'13" W. long. (the longitude of the southern entrance to Imuya Bay near Kilokak Rocks) and a line extending southeast (135°) from the southernmost tip of Kupreanof Point.

5 AAC 27.555. DESCRIPTION OF DISTRICTS. Districts are as described in 5 AAC 15.200.

5 AAC 27.560. FISHING SEASONS AND WEEKLY FISHING PERIODS. (a) Herring may be taken from April 15 through June 30 (sac roe season) and from August 15 through February 28 (food and bait season).

(b) Herring may be taken only during periods established by emergency order.

5 AAC 27.565. GEAR. (a) Herring may be taken only by purse seines.

(b) A herring fishing vessel may operate or assist in operating only one legal limit of herring fishing gear in the aggregate.

(c) Unhung gear sufficient for mending purposes may be carried aboard fishing vessels.

(d) Herring fishing nets shall be measured, either wet or dry, by determining the maximum length of cork line when the net is fully extended with traction applied at one end only.

(e) The interim-use or entry permit holder is responsible for operation of the net.

(f) The use of leads with any net gear used for commercial herring fishing is prohibited during the herring sac roe season.

5 AAC 27.575. SEINE SPECIFICATIONS AND OPERATIONS. No purse seine may be more than 1,000 meshes in depth or more than 100 fathoms in length.

5 AAC 27.580. WATERS CLOSED TO HERRING FISHING. During the period June 12 through October 31, herring may not be taken in waters described in 5 AAC 15.350 and 5 AAC 39.290.

5 AAC 27.590. BUYER AND TENDER REPORTING REQUIREMENTS. In addition to the requirements of 5 AAC 39.130(f) each tender operator and each buyer or his agents shall report in person to and register with a local representative of the department upon arrival in the statistical area before commencing operations and before changing location of the operation. Each buyer shall:

(1) identify all vessels to be employed in transporting or processing herring and shall register such vessels with a local representative of the department located in the statistical area before transporting or processing herring;

(2) make daily reports of all herring purchased from fishermen, and other processing records as specified by a local representative of the department, and

(3) submit fish tickets before departure from the area and no later than 10 days after termination of buying operations in the area, or as otherwise specified by a local representative of the department.

The Alaska Department of Fish and Game administers all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972.

If you believe you have been discriminated against in any program, activity, or facility, or if you desire further information please write to ADF&G, P.O. Box 25526, Juneau, AK 99802-5526; U.S. Fish and Wildlife Service, 4040 N. Fairfax Drive, Suite 300 Webb, Arlington, VA 22203 or O.E.O., U.S. Department of the Interior, Washington DC 20240.

For information on alternative formats for this and other department publications, please contact the department ADA Coordinator at (voice) 907-465-6077, (TDD) 907-465-3646, or (FAX) 907-465-6078.